ЖУРНАЛ
ТЕХНИЧЕСКОЙ ФИЗИКИ

АКАДЕМИЯ НАУК СССР

SOVIET PHYSICS

Technical Physics

VOLUME 2 — INDEX

A Translation

of the

Journal of Technical Physics

of the

Academy of Sciences of the USSR

(RUSSIAN ORIGINAL VOL. 27, NOS. 1-12)

Published by the

AMERICAN INSTITUTE OF PHYSICS

INCORPORATED

SOVIET PHYSICS

Technical Physics

A translation of the "Journal of Technical Physics" of the Academy of Sciences of the USSR

A publication of the
AMERICAN INSTITUTE OF PHYSICS

Governing Board

FREDERICK SEITZ, *Chairman*

Members

WALTER S. BAIRD
JESSE W. BEAMS
RAYMOND T. BIRGE
R. H. BOLT
J. W. BUCHTA
J. H. DILLON
VERNET E. EATON
HERBERT A. ERF
IRVINE C. GARDNER
S. A. GOUDSMIT
C. KITTEL
WINSTON E. KOCK
R. BRUCE LINDSAY
WALTER C. MICHELS
G. E. PAKE
R. RONALD PALMER
JOSEPH B. PLATT
RALPH A. SAWYER
H. D. SMYTH
JOHN STRONG
GEORGE E. UHLENBECK

Officers and Staff

ELMER HUTCHISSON
Director
HENRY A. BARTON
Associate Director
WALLACE WATERFALL
Secretary and Treasurer
EDWARD P. TOBER
Mgr., Production and Distribution
THEODORE VORBURGER
Advertising Manager
RUTH F. BRYANS
Publication Manager
KATHRYN SITZE
Assistant Treasurer
ALICE MASTROPIETRO
Circulation Manager
EUGENE H. KONE
Director of Public Relations
WILLIAM C. KELLY
Director of Education Projects

American Institute of Physics Advisory Board of Russian Translations

ROBERT T. BEYER, *Chairman*

FREEMAN DYSON, DWIGHT GRAY, MORTON HAMERMESH, DAVID HARKER, VLADIMIR ROJANSKY, HARROLD F. WEAVER

Advisory Editor, Soviet Physics—Technical Physics: MORTON HAMERMESH, Argonne National Laboratory, Lemont, Illinois.

"Soviet Physics—Technical Physics" is published by the American Institute of Physics for the purpose of making available in English reports of current Soviet research in physics as contained in the "Journal of Technical Physics" of the Academy of Sciences of the USSR. The translation began with the 1956 issues.

Transliteration of the names of Russian authors follows the system employed by the Library of Congress.

This translating and publishing project was undertaken by the Institute in the conviction that dissemination of the results of research everywhere in the world is invaluable to the advancement of science. The National Science Foundation of the United States encouraged the project initially and is supporting it in large part by a grant. Translation and printing are being handled by Consultants Bureau, Inc.

The American Institute of Physics and its translators propose to translate faithfully all of the scientific material in the "Journal of Technical Physics" of the Academy of Sciences of the USSR appearing after January 1, 1956. The views expressed in the translated material, therefore, are intended to be those expressed by the original authors, and not those of the translators nor of the American Institute of Physics.

One volume is published annually and Volume 3 will contain all of the scientific material published in the original Russian journal during the 1958 calendar year.

Subscription Prices:

Per year (12 issues), starting with Vol. 3, No. 1

General: United States and Canada	$75.00
Elsewhere	79.00
Libraries of non-profit academic institutions:	
United States and Canada	35.00
Elsewhere	39.00
Back numbers, all issues	8.00

Subscriptions should be addressed to the American Institute of Physics, 335 East 45th Street, New York 17, New York.

Copyright American Institute of Physics Incorporated, 1959

Soviet Physics – Technical Physics: Author Index for Vol. 2, 1957

(Russian Original Vol. 27, 1957, Journal of Technical Physics (USSR)

Abdullaev, G. B. and A. A. Bashmaliev. Effect of Bromine Impurity on the Thermal Conductivity of Selenium - 1827.

Ablova, M. S. and A. R. Regel'. Thermal EMF Close to the Fusion Point - 2021.

Adirovich, E. I. and V. G. Kolotilova. The Influence of Emitter Efficiency on the Transient Characteristics of Semiconductor Triodes - 424.

– V. K. Temko. The Transient, Frequency and Phase Responses of a Common-Emitter Transistor - 1068.

Afrosimov, V. V. and N. V. Fedorenko. An Investigation of the Energy of Multi-Charged Ions Produced by the Ionization of Gas Atoms by Positive Ions - 2378.

– N. V. Fedorenko. An Investigation of the Angular Distribution of Secondary Ions Produced by the Ionization of Gas Atoms by Positive Ions - 2391.

Agafonova, F. A., M. A. Gurevich and I. I. Paleev. Theory of Burning of a Liquid Fuel Drop - 1689.

Agranovskaia, A. I. (see Smolenskii, G. A.) - 2351.

Airapetiants, S. V. Thermal Electromotive Force and Additional Thermal Conductivity of Statistical Mixtures - 429.

– B. A. Efimova, T. S. Stavitskaia, L. S. Stil'bans and L. M. Sysoeva. On the Mobility of Electrons and Holes in Solid Solutions Based on Lead and Bismuth Tellurides - 2009.

– A. V. Kogan, N. M. Reinov, S. M. Ryvkin and I. A. Sokolov. On the Use of Germanium n-p α-Ray Counters at Low Temperatures - 1482.

– and S. M. Ryvkin. Characteristics and Operative Mechanism of Germanium n-p Alpha Counters - 79.

– and S. M. Ryvkin. The Mechanism by Which Base Illumination with Visible Light Influences the Pulse Size from Cadmium Sulfide Alpha Counters - 89.

Akhiezer, A. N. On the Inclusion of the Effect of the Thickness of the Screen in Certain Diffraction Problems - 1190.

– N. Akhiezer and G. Liubarskii. Effective Boundary Condition of the Surface of Separation Between Multiplying and Moderating Media - 749.

Akhiezer, N. (see Akhiezer, A.) - 749.

Aleinikov, F. K. The Influence of Abrasive Powder Microhardness on the Values of Coefficients of Volume Removal, Determined by the Lapping Method - 505.

– The Effect of Certain Physical and Mechanical Properties on the Grinding of Brittle Materials - 2529.

Aleksandrov, G. N. Computation of Corona Characteristics for Stranded Electrical Transmission Lines - 711.

– and G. A. Shneerson. AC-Corona Characteristics of Split Conductors - 1683.

– and N. N. Tikhodeev. On One Erroneous Hypothesis in the Corona Theory - 369.

Aleksandrov, V. T. (see Svechnikov, S. V.) - 842.

Alekseeva, V. G., S. G. Kalashnikov, L. P. Kalnach, I. V. Karpov and A. I. Morozov. Effect of Group III and V Elements on the Electron-Hole Recombination Rate in Germanium - 1794.

– B. N. Zobnina and I. V. Karpova. The Effect of Heating Germanium by an Electric Current on the Concentration of Thermal Acceptors - 190.

Al'tshul', A. D. On the Efflux of Liquids of Considerable Viscosity for Variable Level and the Theory of the Engler Viscosimeter - 731.

Al'tshuler, L. M. The Temperature Field of Tubes in a Solid Body - 1382.

Ambrok, G. S. The Effect of Surface Temperature Variability on Heat Exchange in Laminar Flow in a Boundary Layer - 738.

– Approximate Solution of Equations for the Thermal Boundary Layer with Variations in Boundary Layer Structure - 1979.

Ansel'm, A. I. and L. I. Korovin. Calculation of Oscillator Strengths for Transitions of an Impurity Electron in a Uniaxial Crystal - 1467.

– and Iu. L. Rabotnikov. On the Question of the Effect of Anharmonicity on Vibrations and Waves in a Crystal (Linear Atomic Chain) - 1602.

Atabekov, G. I. Regarding a Paper by B. I. Iakhinson - 380.

Babanov, A. A. Methods for Calculation of Thermal Conduction Coefficients of Capillary-Porous Materials - 476.

Bakanov, S. P. On the Question of Molecular Gas Flow Through a Porous Membrane - 1503.

– (see Deriagin, B. V.) - 1904.

Balabanova, L. A. and M. M. Bredov. Thermal Conversion of Germanium when it is Irradiated by an Electron Beam - 1295.

Balygin, I. E. Some Aspects of Dendrite Growth on Rock Salt at 200 and 300°C - 1121.

– Insulating Liquids Breakdown with Restricted Discharge Channel Currents - 2129.

— and N. T. Plashchinskii. Electrical Conductivity of Ceramic Materials in Strong Electric Fields 118.
— and K. S. Porovskii. Effect of Electrode Metal on Insulation Aging of Ceramic Dielectrics - 459.
Baranskii, P. I. and V. E. Lashkarev. Measurement of the Bulk Thermal EMF in Germanium - 1055.
— (see Shtenbek, M.) - 195, 205.
Barsukov, Iu. K. Transient Blocking in Flat Germanium DG-Ts Diodes - 2094.
— The Representation of a Semiconducting Diode as a Series Combination of Two Nonlinear Delay Links, and the Applicability of Pulse Voltage Division Methods - 2103.
Bartenev, G. M. and S. G. Liozniankaia. The Relaxation of Stresses in Tempered Glass - 2539.
Bashmaliev, A. A. (see Abdullaev, G. B.) - 1827.
Basilevich, V. V. and N. P. Tverskoi. Freezing of Drops of a Supercooled Water Mist in an Acoustic Field - 1696.
Beliakova, V. V. and M. A. Mittsev. Passage of Positive Ions of Lithium Through Thin Evaporated Layers of Aluminum - 729.
Berman, L. S. Utilization of the Hall Effect in Semiconductors for the Purpose of Measuring Electric Power - 1088.
— S. S. Raikhman and Z. A. Khalfin. A Balanced Modulator Using the Hall Effect in Semiconductors - 1480.
Bilenko, D. N. (see Kir'iashkina, Z. L.) - 69.
Bir, G. L. and G. E. Pikus. The Influence of Surface Recombination on the Efficiency of a Photocell with a p-n Transition Region - 419.
Bobrikov, V. P. Effect of Wetting the Surfaces of Ionic Crystals on the Development of One of the Equivalent Dodecahedral Glide Systems During Linear Deformation - 758.
Bochagov, B. A., A. A. Vorob'ev and A. P. Komar. A Pulse Ionization Chamber as an Instrument for the Simultaneous Study of the Energy and Angular Distributions of Charged Particles - 1458.
Bogomazov, A. P. (see Ryvkin, S. M.) - 1484.
Bogomolov, V. N. Galvanomagnetic Oscillators - 594.
— Iu. V. Ilisavskii, M. Kornfel'd, L. S. Sochava and R. L. Strunin. Low-Inertia Germanium Bolometers - 188.
— and V. A. Miasnikov. Installation for Measuring the Hall Effect in Semiconductors - 1103.
— and V. D. Vasil'ev. A Linear-Detector Measuring Device Based on the Hall Effect - 229.
Bogoroditskii, N. P., G. V. Bois, M. N. Kozlovskaia and M. I. Neiman. The Mechanical Strengths of Radio Ceramics as a Function of Their Heat Treatment - 606.
Boikova, A. I. and E. A. Porai-Koshits. X-Ray Investigation of Solid Solutions of Calcium Aluminoferrites - 1023.
Bois, G. V. (see Bogoroditskii, N. P.) - 606.
Bokov, V. A. The Problem of the Nature of the High Permittivity Observed in Certain Solid Solutions which Exhibit Ferroelectric Properties - 1657.
Boltaks, B. I. and G. S. Kulikov. On the Diffusion of Indium, Antimony and Tellurium in Indium Antimonide - 67.
— and B. T. Plachenov. Self- Diffusion in Selenium - 2071.
Bondarenko, R. N. (see Lashkarev, V. E.) - 2271.
Borisovskii, E. S. (see Mazurin, O. V.) - 243.
Borodovskii, P. A. Application of Harmonic Electron Oscillations for Generating Ultrahigh Frequencies - 2189.
Borshchevskii, A. S., N. A. Goriunova and N. K. Takhtareva. Study of Microhardness of Certain Semiconductors with the Zinc Blende Structure - 1301.
— Bredov, M. M. and I. Z. Kshemianskaia. The Electrification Observed After the Contact of Two Bodies - 844.
— (see Balabanova, L. A.) - 1295.
Bresler, S. E., E. M. Saminskii and E. N. Kazbekov. A Paramagnetic Resonance Microwave Spectrometer for the Study of Chemical Reactions - 2357.
Brilliantov, N. A. and A. B. Fradkov. Degree of Purification of Hydrogen and Helium by a Chromatographic Process on Activated Carbon - 2239.
Briukhina, Z. V. On the Problem of Raising the Thermal Breakdown Potential of Metallized Paper Capacitors - 1887.
Bugai, A. A., V. E. Kosenko and E. G. Miseliuk. Diffusion and Solubility of Iron in Germanium - 183.
— V. E. Kosenko and E. G. Miseliuk. Diffusion and Solubility of Silver in Germanium - 1553.
Buimistrov, V. L. (see Pekar, S. I.) - 2478.
Burov, Iu. G. Heat Exchange with Steam Condensation on Vertical Tubes - 297.
Burshtein, A. I. An Investigation of the Steady-State Heat Flow Through a Current-Carrying Conductor - 1397.
Burshtein, L. L. and G. P. Mikhailov. Application of the New Theories of Polarization to the Calculation of Effective Dipole Moments of Polar Systems - 617.

– and G. P. Mikhailov. Investigation of Molecular Interaction in Polymers by the Method of Effective Dipole Moments - 624.
Chapnik, I. M. The Theory of the Striated Positive Column in the Case of Dominance of Volume Recombination - 894.
Cherepanov, A. M. Growing $BaTiO_3$ Single Crystals - 2119.
Chemiak, M. G. and G. G. Naidus. Investigation of the Wettability of Certain Materials by Molten Glass - 2108.
Chirikov, B. V. (see Volosok, V. I.) - 2437.
Danilkin, I. S. and M. S. Rabinovich. Resonant Perturbations of Synchrotronic Oscillations in Charged- Particle Accelerators - 1442.
Deigen, M. F., I. M. Dykman and K. B. Tolpygo. All-Union Conference on Theory of Semiconductors - 1513.
Dekabrun, I. I. On a Method for Measuring and Registering "Ultra-Small" Currents - 1461.
Deriagin, B. V. and S. P. Bakanov. Theory of the Flow of a Gas in a Porous Material in the Near-Knudsen Region - 1904.
– V. V. Karasev, N. N. Zakhavaeva and V. P. Lazarev. Mechanism of Boundary Lubrication and the Properties of the Boundary Lubrication Film - 980.
– (see Kotova, L. I.) - 1154.
Deviatkova, E. D. A Study of the Thermal Conductivity of Lead Telluride - 414.
– and I. A. Smirnov. The Thermal Conductivity of Germanium - 1805.
Didenko, A. N. Effect of the Quantum Nature of the Radiation on Radial Phase Oscillations in Cyclic High-Energy Electron Accelerators - 1509.
Dmitriev, V. A. Shape of the Electron-Pulse in an Ionization Chamber - 179.
Dobrer, E. K. and K. N. Karmen. Some Features of the Piezoelectric Effect of Barium Titanate as Measured Statistically - 455.
Dobretsov, L. N. and T. L. Matskevich. The Role of Reflected Electrons in Secondary Electron Emission - 663.
Doil'nitsyn, E. F., A. I. Trubetskoi and M. Ia. Shcherbakova. Radiofrequency Mass-Spectrometer - 364.
Dorin, V. A. and D. N. Nasledov. The Structure of the Upper Layer at the Electrode in a Selenium Rectifier - 74.
Drozdov, N. G. (see Valeev, Kh. S.) - 2341.
Dunskii, V. F. Paths of Hot Jets in the Layer of the Atmosphere Just Above the Ground - 962.
Dykman, I. M. The Method of Traces in the Exciton Problem - 1609.
– (see Deigen, M. F.) - 1513.
Efendiev, A. Z. An Investigation of the Pulse Breakdown of Gases and the Rate of Development of Electron Avalanches - 921.
Efimova, B. A. (see Airapetiants, S. V.) - 2009.
Eichin, V. A. (see Viatkin, A. P.) - 1099.
Elpat'evskaia, O. D. and V. A. Perchuk. Oscillographic Study of the Magnetic Field of a Direct Current Electric Motor by Means of the Hall Effect in Films - 1478.
– and A. R. Regel'. Some Features of the Electrical Properties of HgSe-HgTe Films - 35.
Fedorenko, N. V. (see Afrosimov, V. V.) - 2378, 2391.
Fediaevskii, K. K. and A. S. Ginevskii. A Method for Computing the Turbulent Boundary Layer when a Longitudinal Pressure Gradient is Present - 275.
Fiks, V. B. On the Influence of Convection on Diffusion - 1176.
Filimonov, S. S. (see Konakov, P. K.) - 971.
Filipovich, V. N. On the Collimation Correction in the Theory of Small-Angle X-Ray Scattering - 938.
Filler, F. M. (see Vereshchagin, L. F.) - 2451.
Finagin, B. A. On the Doublet Splitting of Resonance Vibrational Frequencies of a Tourmaline Piezoelectric Plate - 2027.
Firsov, Iu. A. Magnetic Susceptibility in Tellurium-Type Semiconductors - 2053.
Fisher, I. Z. The Effects of Screening a Coulomb Field by Free Charges in Metals and Semiconductors - 570.
– and V. I. Krylovich. The Hydrogenlike System with Partially Screened Coulomb Potential - 1184.
Fogel', Ia. M., L. I. Krupnik, A. G. Koval' and R. P. Slabospitskii. The Composition of the Equilibrium Beam Formed by the Passage of Singly-Charged Positive Oxygen Ions Through Gas Targets - 902.
– L. I. Krupnik, and R. P. Slabospitskii. Formation of Negative Hydrogen Ions on Passage of Positive Hydrogen Ions Through a Supersonic Stream of Oil Vapors - 897.
– (see Timofeev, A. D.) - 1974.
Fomicheva, M. M. (see Kuvshinskii, E. V.) - 929.
Fortunatova, N. N. (see Glinchuk, K. D.) - 2283, 2476.
Fradkov, A. B. (see Brilliantov, N. A.) - 2239.
Frenkel', V. Ia. The Emission Properties of Aluminum Oxide at High Temperatures - 2192.
Frumkin, A. L. (see Valeev, Kh. S.) - 2341.
Gabovich, M. D. and E. T. Kucherenko. Plasma Penetration in a Mercury-Vapor Discharge - 286.

Gaibullaev, F. and A. R. Regel'. Characteristics of the Temperature – Resistivity Relationship for Liquid Eutectic Systems - 1850.
– and A. R. Regel'. Some Characteristics of Temperature Dependence of Electrical Conductivity of Single Phase Solutions of Ag-Au, In-Pb and Bi-Sb Systems in the Solid and Liquid States - 2082.
Galaktionov, V. A. (see Vereshchagin, L. F.) - 2451.
Galavanov, V. V. On the Width of the Forbidden Band in InSb - 583.
– (see Vinogradov, K. L.) - 1832.
Gal'perin, E. L. and Iu. S. Terminasov. Influence of Extinction on the Intensity of X-Ray Interferences in the Investigation of Steel - 1276.
Gaman, V. I. (see Presnov, V. A.) - 857.
Gel'bukh, L. A. A Calculation of the Magnetic Moment Induced in a Ferromagnetic Ellipsoid of Revolution in an Alternating Magnetic Field - 489.
Gel'd, P. V. Thermal and Thermoelectric Properties of Alloys of Silicon with Transition Metals - 95.
Gel'perin, I. I. and K. S. Minsker. The Determination of Heat Transfer Surface for the Case of Zero Temperature Difference Between Cooled and Coolant Fluids at the End Point of Flow - 1987.
Gerashchenko, O. A. and M. M. Nazarchuk. On the Wettability of Surfaces in Connection with the Solution of Hydrodynamical Problems - 2596.
Gershtein, E. Z., T. S. Stavitskaia and L. S. Stil'bans. A Study of the Thermoelectric Properties of Lead Telluride - 2302.
Ginevskii, A. S. (see Fediaevskii, K. K.) - 275.
Gladkov, A. Y. The Structure of Glasses and Ultrasonic Propagation Velocities - 612.
Glikman, V. F. On the Problem of Nonstationary Heat Transfer Through a Plate - 2593.
Glinchuk, K. D., E. G. Miseliuk and N. N. Fortunatova. Investigation of Recombination of Current Carriers in Germanium with Iron Impurity - 2283.
– E. G. Miseliuk and N. N. Fortunatova. Effect of Annealing on Local Levels and the Nonequilibrium Current-Carrier Lifetime in Germanium with Iron Impurity - 2476.
Gofman, I. L., B. G. Smirnov, G. S. Spirin and G. N. Shuppe. On Electrostatic Electron Emission of Semiconductors - 2471.
Golant, V. E. Formation of a Pulsed Discharge in Argon at Ultra-High Frequencies. I. Electron-Velocity Distribution Function - 684.
– Production of a Pulsed Discharge in Argon at Ultra-High Frequencies. II. Production of a Discharge by Retangular Power Pulses - 699.
– The Origin of a Pulse Discharge in Neon at Ultra-High Frequencies - 1370.
– Initiation of Pulsed Discharge in Argon at Ultra-High Frequencies. III. Initiation of the Discharge Under the Action of an Exponentially Increasing High-Frequency Power - 1919.
Golubchin, G. N. and A. M. Starik. Effectiveness of the Auxiliary Discharge in Wide-Band TR-Tubes as a Function of Position of the Keep-Alive Electrode - 1935.
Golubeva, L. A. (see Voitsekhovskaia, I. A.) - 1474.
Gorbatyi, N. A., L. V. Reshetnikova, E. P. Sytaia and G. N. Shuppe. Electrostatic Emission from a Tantalum Single Crystal - 262.
Gordienko, V. I. (see Pivovar, L. I.) - 909.
Gorlunova, N. A. (see Borshchevskii, A. S.) - 1301.
Gorkun, Iu. I. On the Theory of the Fast Polaron - 1639.
Gotlib, Iu. Ia. Internal Rotations in Polymer Chains and Their Physical Properties. V. Mean Anisotropy of Linear Polymer Molecules with a Symmetric Potential of Retarded Internal Rotation - 637.
Grenishin, S. G. and A. A. Solodovnikov. Temperature Dependence of Spectral Absorption in Silver Bromide Crystals - 231.
Gribnikov, Z. S. and K. B. Tolpygo. The Injection Coefficient and Direct Volt-Ampere Characteristic of a Spherical Contact - 555.
– and K. B. Tolpygo. Emission by a Spherical Contact in a Drawing Electric Field - 2074.
Grinberg, G. A. In Regard to the Criticism by P. P. Kas'iankov of My Method of Obtaining the Principal Electron-Optical Equations for Pencils with Curvilinear Axes - 2259.
– A New Method for Solving Problems Related to the Diffraction of Electromagnetic Waves by a Plane with an Unbounded Straight Slit - 2410.
– and Iu. V. Pimenov. On the Question of Diffraction of Electromagnetic Waves from Infinitesimally Thin Ideally Conducting Plane Screens - 2160.
Gross, E. F. and B. S. Razbirin. A Hydrogen-Like Series of Lines in the Spectrum of a Cadmium Sulfide Crystal at the Fundamental Absorption Edge - 1293.
– and B. S. Razbirin. Absorption Edge Spectra in Cadmium Sulfide Crystals and Their Relation to Crystal Surface and Deformation - 2014.
– B. S. Razbirin and M. A. Iakobson. Line-Like Spectrum at the End of the Fundamental Absorption, and the Structure of Cadmium Sulfide Crystals - 181.

– B. S. Razbirin and M. A. Iakobson. Line Spectrum of the Main Absorption Edge of Crystals of Cadmium Sulfide - 1043.
– and B. P. Zakharchenia. Diamagnetic Zeeman Effect and Exciton Structure in the Crystal of Cuprous Oxide - 1802.
– B. P. Zakharchenia and P. P. Pavinskii. Diamagnetic Exciton Levels and Cyclotron Resonance - 2018.
Gubanov, A. I. The Electrical and Thermal Conductivities, Thermoelectric Power, Hall and Nernst Constants of Amorphous Substances with Electron Conductivity - 1.
– Change of Properties of Semiconductors During Melting - 2335.
– and Iu. P. Lun'kin. The Kinetic Equations of Gas Dissociation Including Diffusion - 2443.
Gubkin, A. N. The Phenomenological Theory of Electrets - 1813.
– and G. I. Skanavi. The Anomalous Stabilities of New Inorganic Polycrystalline Electrets - 1825.
Gukhman, A. A. Concerning P. V. Dvorichenko's Article, "Certain Concepts Concerning the Procedure for Calculation of Heat Exchange and Hydrodynamic Resistance of High-Speed Gas Flow." - 801.
Gurevich, M. A. (see Agafonova, F. A.) - 1689.
Gusa, V. and I. Tsigelka. Measurement of the Temperature of a High Pressure Electric Arc in a Pneumatic Switch by a Method Based on the Plugging of the Nozzle - 880.
Iakhinson, B. I. Regarding the Letter of Doctor of Technical Sciences Professor G. I. Atabekov - 383.
Iakobson, M. A. (see Gross, E. F.) - 181, 1043.
Iatsenko, A. F. The Optical Transmission Spectrum of Barium Titanate - 2257.
Iavor, I. P. and A. P. Komar. A Fast-Acting Wilson Chamber Synchronized with a Synchrotron - 794.
Iglitsyn, M. I., Iu. A. Kontsevoi and V. D. Kudin. Measurement of the Lifetime in Monocrystalline Silicon - 1316.
– Iu. A. Kontsevoi, V. D. Kudin and A. A. Meier. Measuring the Lifetime of Charge Carriers in Semiconductors - 1306.
– Iu. A. Kontsevoi and A. I. Sidorov. Distribution of Nonequilibrium Charge Carriers in the Base Region of a p-n Junction with a High Injection Coefficient - 2289.
– Iu. A. Kontsevoi and A. I. Sidorov. Lifetime of Nonequilibrium Charge Carriers in Germanium at Arbitrary Levels of Injection - 2292.
Ilisavskii, Iu. V. (see Bogomolov, V. N.) - 188.
Ioffe, A. F. Certain Problems in the Future Development of Semiconductor Science - 1049.
– Technical Physics in the Soviet Union - 2267.
Ioffe, V. A. Nature of the Dielectric Loss in Soda – Alumina Silicate Glasses - 1344.
– G. I. Khvostenko and Z. N. Zonn. Electrical Properties of Certain Single Crystals and Polycrystalline Ferrites - 1840.
Iordanishvili, E. K. and L. G. Tkalich. A Semiconductor Thermostat for Self-Excited Oscillators - 1109.
Isupov, V. A. Dielectric Permeability of Compounds Close to $BaTiO_3$ in the $BaO-MgO-TiO_2$ System - 1501.
– and O. K. Khomutetskii. Dielectric Polarization of Cadmium Niobate and Certain Related Solid Solutions - 2513.
– (see Smolenskii, G. A.) - 2351.
Iudaev, G. A. (see Lepeshinskaia, V. N.) - 450.
Iunovich, A. E. On Determining the Relaxation Time of Surface States in Germanium - 1587.
Ivanov, G. A. (see Mokievskii, L. L) - 1576.
Izhak, I. A. A Study of the Effect of Unilateral Compression on the Dielectric Permeability of Ceramic $BaTiO_3$ in Strong Fields - 872.
Kabin, S. P. (see Mikhailov, G. P.) - 1899.
Kachurin, L. G. Solution of the Problem of Solidification of a Sphere, Taking into Account the Variation of the Temperature at the Crystallization Front During the Process of Solidification - 485.
Kalashnikov, S. G., E. Iu. L'vova and V. V. Ostroborodova. Electrical Properties of Zinc-Doped Germanium - 1789.
–(see Alekseeva, V. G.) - 1794.
Kaliazina, N. N. Investigation of Dielectric Losses in Insulating Papers - 2524.
Kalnach, L. P. (see Alekseeva, V. G.) - 1794.
Kaminskii, N. K. (see Mints, A. L.) - 1237.
Kaplunova, E. L and K. B. Tolpygo. The Temperature Dependence of the Hall Coefficient in Semiconductors with Constant Carrier Concentrations - 2087.
Karasev, V. V. (see Deriagin, B. V.) - 980.
Karmen, K. N. (see Dobrer, E. K.) - 455.
Karpov, I. V. (see Alekseeva, V. G.) - 190, 1794.
Kartuzhanskii, A. L. (see Soltitskii, B. P.) - 540.
Kashcheev, V. N. Comparison of the Abrasive Properties of Grains of Minerals by the Method of Mutual Grinding - 1001.
Kashtanova, A. M. (see Skanavi, G. I.) - 1845.
Kazarian, R. A. (see Vinogradov, D. N.) - 514.
Kazbekov, E. N. (see Bresler, S. E.) - 2357.

Kel'man, V. M., K. G. Utkin and L. N. Loginova. Simple Design for a Rubber-Sheet Apparatus for Determining the Trajectories of Charged Particles in the Presence of Space Charge - 1938.
Khalfin, Z. A. (see Berman, L. S.) - 1480.
Khartsiev, V. E. On Simple Methods for Investigating the Band Structure of Certain Semiconductor Compounds - 1593.
Khizhniak, N. A. Artifical Anisotropic Dielectrics. I. - 1858.
– Artifical Anisotropic Dielectrics. II. - 1865.
– Artifical Anisotropic Dielectrics. III. - 1877.
Kholodenko, L. P. and M. Ia. Shirobokov. Concerning the Theory of the Ferroelectric Properties of Polarized Barium Titanate Ceramics - 851.
Khomenko, V. S. The Transition of a Single-Phase System into a Two-Phase System Under the Influence of a Heat Source - 1418.
Khomutetskii, O. K. (see Isupov, V. A.) - 2513.
Khrustalev, B. A. (see Konakov, P. K.) - 971.
Khvostenko, G. I. (see Ioffe, V. A.) - 1840.
Kir'iashkin, V. I. (see Kir'iashkina, Z. I.) - 69.
Kir'iashkina, Z. I., F. M. Popov, D. N. Bilenko and V. I. Kir'iashkin. An Investigation of the Dielectric Permittivity of Semiconductors - 69.
Kleshchevnikova, S. I., Ia. E. Pokrovskii and E. I. Rumiantseva. Preparation of Pure Silicon by Thermal Decomposition of Silane - 1529.
Klimin, A. I. Auto-Electronic Emission from Cadmium Sulfide and Cadmium Selenide - 649.
Klinger, M. I. On the Question of Low-Temperature Anomalies in Impurity Semiconductors. I. - 1782.
– On the Question of Low-Temperature Anomalies in Impurity Semiconductors. II. - 1786.
– Theory of Transport Phenomena - 2578.
– and P. I. Voroniuk. Magneto-Resistive Phenomena in n-Ge or n-Si with Strong Magnetic Fields - 1491.
– and Iu. I. Zozulia. The Theory of Semiconductors with an Excited Impurity Band - 2123.
– (see Samoilovich, A. G.) - 2583.
Kodzhespirov, F. F. (see Kolomoitsev, F. I.) - 823.
Kogan, A. V., N. M. Reinov, I. A. Sokolov and M. F. Stel'makh. The Use of Helium-Filled Proportional Counters at Low Temperatures - 381.
– (see Airapetiants, A. V.) - 1482.
Kogan, M. G. Nonstationary Thermal Conductivity in Laminar Bodies - 467.
Kogarko, S. M. Investigation of the Pressure in the Detonation of a Fuel-Oxygen Mixture by the Recoiling-Rod Method - 761.
Kolomiets, B. T., I. T. Sheftel' and E. V. Kurlina. Electrical Properties of Some Compound Oxide Semiconductors - 40.
– (see Vengel', T. N.) - 2314.
Kolomoets, N. V., T. S. Stavitskaia and L. S. Stil'bans. An Investigation of the Thermoelectric Properties of Lead Selenide and Lead Telluride - 59.
Kolomoitsev, F. I. and F. F. Kodzhespirov. Appearance of Electromotive Forces in Amorphous Selenium Under the Action of X-Rays - 823.
Kolotilova, V. G. The Passage of Single and Periodic Current Impulses Through a Semiconductive Triode - 561.
– (see Adirovich, E. I.) - 424.
Komar, A. P. (see Bochagov, B. A.) - 1458.
– (see Iavor, I. P.) - 794.
Konakov, P. K., S. S. Filimonov and B. A. Khrustalev. Calculation of Heat Exchange by Radiation in Cooled Combustion Chambers - 971.
Koniukov, M. V. A Remark on I. M. Chapnik's Theory of the Striated Positive Column - 1927.
Konovalenko, B. M. (see Ryvkin, S. M.) - 1484.
Konozenko, I. D. and V. I. Ust'ianov. On the Electrical Properties of System: Lead-Antimony - 1567.
Konotorova, T. A. On the Scattering of Current Carriers in Semiconductors with Ionic Binding - 237.
Kontsevoi, Iu. A. (see Igitsyn, M. I.) - 1306, 1316, 2289, 2292.
Korenblit, L. L. Magnetic Susceptibility of Mott Excitons in Semiconductors - 434.
– (see Samoilovich, A. G.) - 2483.
Kornfel'd, M. I. Design of Radiation Bolometers - 2462.
– (see Bogomolov, V. N.) - 188.
Korobochko, Iu. S. On the Mechanism of Electron Capture in Betatrons - 673.
– A Study of the Process of Capture of Electrons in the Betatron - 1486.
Korobova, I. P. (see Kruglov, A. I.) - 2255.
Korovin, L. I. Interaction of an Impurity Center Electron with the Acoustic Vibrations of a Uniaxial Crystal - 828.
– (see Ansel'm, A. I.) - 1467.
Kosenko, V. E. A Study of the Characteristics of Plane-Parallel Germanium Diodes - 406.
– (see Bugai, A. A.) - 183, 1553.
Kotova, L. I. Theory of the Rolling of a Cylinder on a Surface Covered with a Layer of a Viscous-Plastic Lubricant - 1424.

– and B. V. Deriagin. Theory of a Cylinder Rolling on a Surface Covered with a Layer of Plastic Lubricant - 1154.
Koval', A. G. (see Fogel', Ia. M.) - 902.
Kovalev, E. E. and V. I. Popov. On the Calculation of Multiple Scattering in Cylindrical Sources - 1506.
Kozlovskaia, M. N. (see Bogoroditskii, N. P.) - 606.
Kozlovskii, V. Kh. On Stability of States in Ferroelectric Crystals - 1290.
Kozyrev, P. T. Equilibrium and Nonequilibrium Electrical Properties of Polycrystalline Selenium - 27.
Kruglov, A. L., S. K. Myzova and L. P. Korobova. On the Dependence of the Electrical Erosion of Metals on the Impulse Energy - 2255.
Krupnik, L. L. (see Fogel', Ia. M.) - 897, 902.
Krylova, T. A. (see Mikhailov, G. P.) - 1899.
Krylova, T. V. (see Mochan, L. V.) - 213.
Krylovich, V. I. (see Fisher, I. Z.) - 1184.
Kshemianskaia, I. Z. (see Bredov, M. M.) - 844.
Kubanskii, P. N. Behavior of a Resonant System in a Current - 158.
– Axially-Symmetrical Acoustic Streaming at the Walls of a Cylinder - 1165.
Kucherenko, E. T. (see Gabovich, M. D.) - 266.
Kucherov, R. Ia. Diffusive Slip and Convective Diffusion of a Gas in a Capillary - 2001.
Kudin, V. D. (see Iglitsyn, M. I.) - 1306, 1316.
Kudriavtsev, E. V. and N. V. Shumakov. The Method of Average Temperature for the Study of the Process of Heating a Solid Body - 782.
Kulikov, G. S. (see Boltaks, B. I.) - 67.
Kupriianchik, N. N. (see Mikhailov, G. P.) - 868.
Kurlina, E. V. (see Kolomiets, B. T.) - 40.
Kurochkin, S. S. Dynamic Distortions of Nuclear Magnetic Resonance Signals and Allowances for Such Distortion in Magnetic Measurements - 676.
Kurov, G. A. On the Structure and Properties of Films Produced by Vacuum Evaporation of InSb - 2022.
– On the Physico-Chemical Properties of Magnesium-Bismuth and Magnesium-Antimony Compounds in Thin Layers - 2474.
Kushnarev, V. K. (see Parfent'ev, A. I.) - 2222.
Kuvshinskii, E. V. and M. M. Pomicheva. Effect of the Molecular Weight of Rubber on the Dynamic Mechanical Properties of Rubbers (Vulcanizates) - 929.
– and E. A. Sidorovich. The Effect of Vulcanization on the Dynamic Elastic Properties of Rubber - 632.
– (see Votinov, M. P.) - 2139, 2143, 2375.
Kvasnitskaia, A. N., E. B. Mertens, E. G. Miseliuk and A. I. Skopenko. Point-Contact Triodes of Germanium with Small Lifetime of the Injected Current Carriers - 393.
Lashkarev, V. E., V. G. Litovchenko, N. M. Omel'ianovskaia, R. N. Bondarenko and V. I. Strikha. Dependence of the Foreign (Injected) Current-Carrier Lifetime on the Concentration of Antimony Impurity in Germanium - 2271.
– (see Baranskii, P. I.) - 1055.
– (see Zhidkov, V. A.) - 803.
Lazarev, A. N. Absorption Spectrum of KH_2PO_4 in the Region of Hydroxyl Valence Vibration - 385.
Lazarev, V. P. (see Deriagin, B. V.) - 980.
Lebedev, N. N. The Electrostatic Field of an Immersion Electron Lens Formed by Two Diaphragms - 1943.
Lebedeva, V. A. (see Lepeshinskaia, V. N.) - 1131.
Lekhtinen, G. N., M. A. Rzaev and L. S. Stil'bans. Investigation of the Temperature Dependence of the Work Function of Several Semimetals - 1114.
Leko, E. K. (see Mazurin, O. V.) - 2511.
Lepeshinskaia, V. N. and G. A. Iudaev. On the Spectral Characteristic of the External Photoelectric Effect from an Activated Copper-Magnesium Alloy - 450.
– and V. A. Lebedeva. The Work Function of Activated Alloys of CuAlMg and CuAlBe - 1131.
Lev, E. Ia. (see Mazurin, O. V.) - 2511.
Levitskii, S. M. An Investigation of the Breakdown Potential of a High-Frequency Plasma in the Frequency and Pressure Transition Regions - 887.
– Space Potential and Electrode Sputtering in a High-Frequency Discharge - 913.
Liashenko, V. I. Change of Lifetime in Thin Germanium Plates When in an External Electric Field and With Adsorption - 1496.
Likhtman, V. I. (see Veller, S. Ia.) - 989.
Lioznianskaia, S. G. (see Bartenev, G. M.) - 2539.
Lipnik, A. A. Decay of an Exciton by Interaction with a Phonon in an Atomic Semiconductor - 2575.
Litovchenko, V. G. (see Lashkarev, V. E.) - 2271.
Liubarskii, G. (see Akhiezer, A.) - 749.
Liutsau, V. G. (see Rovinskii, B. M.) - 309, 2005.
Livshits, L. D. (see Riabinin, Iu. N.) - 2156.
Loginova, L. N. (see Kel'man, V. M.) - 1938.
Logunov, V. N., E. P. Ovchinnikov and V. D. Rusanov. The Dependence of Betatron Bremsstrahlung on the Injection Parameters - 1032.

— E. P. Ovchinnikov, V. D. Rusanov and S. S. Semenov. The Nonstationary Circulating Current Associated with the Injection of Electrons into a Betatron - 1038.
Lomakina, G. A., Iu. A. Vodakov, G. P. Naumov and Iu. P. Maslakovets. A Tube Photoelectric Element of Cadmium Telluride (Preliminary Communication) - 1477.
Lubny-Gertsyk, A. L. Certain New Methods of Approximate Calculation of Radiative Heat Transfer - 1255.
Lun'kin, Iu. P. The Structure of Shock Waves - 1169.
— Gas Parameters at the Critical Point with Variation of the Specific Heat Taken into Account - 1700.
— (see Gubanov, A. I.) - 2443.
L'vova, E. Iu. (see Kalashnikov, S. G.) - 1789.
Lyn Tsy-yui (see Mikhailov, M. M.) - 861.
Makhalov, Iu. A. (see Ryvkin, S. M.) - 397.
Makovskii, F. A. and E. P. Usachev. Effect of Surface Treatment on the Properties of Copper-Oxide Rectifiers - 2585.
Mamyrin, B. A. and B. N. Shustrov. Mass Spectrometers with a Resolving Power of Several Thousand - 1246.
Manakova, M. A. (see Tsukerman, V. A.) - 353.
Mash, D. I. Rotation of the Vibration Plane of Millimeter Waves in a Magnetic Field (Faraday Effect) - 324.
Mashkovich, M. D. (see Valeev, Kh. S.) - 1533.
Mashovets, T. V. and S. M. Ryvkin. On Recombination Centers in Germanium After "Low-Temperature" Heat Treatment - 210.
Maslakovets, Iu. P. (see Lomakina, G. A.) - 1477.
Maslennikov, M. V. (see Vereshchagin, L. F.) - 1472.
Matskevich, T. I. Investigation of Electron-Reflection by Dielectrics - 255.
— (see Dobretsov, L. N.) - 663.
Matveev, O. A. (see Ryvkin, S. M.) - 1484.
Mazurin, O. V. and E. S. Borisovskii. Neutralization Reduction of Electrical Conductivity in Silica Glasses - 243.
— G. A. Pavlova, E. Ia. Lev and E. K. Leko. Silicate Glasses Showing Electron Conductivity - 2511.
Medovar, B. I. The Mechanism of Formation of Intercrystalline Cracks in the Heat-Affected Zone in Fusion Welding - 1454.
Medvedev, K. E. Selection of the Shape of Specimens for Breakdown Test of Ceramic Dielectric Materials - 2245.
Meier, A. A. (see Iglitsyn, M. I.) - 1306.
Merkulov, L. G. Absorption and Diffusive Scattering of Ultrasonic Waves in Metals - 953.
— The Use of Ultrasonic Waves in Investigating the Structure of Steels - 1282.
Merkulov, V. V. On the Theory of the Propagation of Electromagnetic Waves in Media with Random Inhomogeneities in the Index of Refraction - 958.
Mertens, E. B. (see Kvasnitskaia, A. N.) - 393.
Miae, E. A. (see Shpigel', I. S.) - 314, 349.
Miasnikov, V. A. (see Bogomolov, V. N.) - 1103.
Mikhailov, G. P., S. P. Kabin and T. A. Krylova. On the Dielectric and Mechanical Losses of Low Pressure Polyethylene - 1899.
— B. I. Sazhin and N. N. Kuprianchik. On Certain Peculiarities of the Dielectric Losses of Polycaprolactam - 868.
— (see Burshtein, L. L.) - 617, 624.
Mikhailov, M. M. and Lyu Tsy-yui. Stability of Certain Organic Materials to Discharges - 861.
Minsker, K. S. (see Gel'perin, I. L.) - 1987.
Mints, A. L. and N. K. Kaminskii. A Cascaded Synchrocyclotron - 1237.
Mints, M. Ia. Theory of a Magnetron with a Cylindrical Anode - 1203.
— The Theory of a Split-Anode Magnetron - 1210.
— (see Pargamanik, L. E.) - 1197.
Miropol'skii, Z. L. and M. E. Shitsman. Heat Transfer to Water and Steam at Variable Specific Heat (in Near-Critical Region) - 2196.
Miseliuk, E. G. (see Bugai, A. A.) - 183, 1553.
— (see Glinchuk, K. D.) - 2283, 2476.
— (see Kvasnitskaia, A. N.) - 393.
Mittsev, M. A. (see Beliakova, V. V.) - 729.
Mochan, L. V., Iu. N. Obraztsov and T. V. Krylova. Study of Thermomagnetic Effects in Germanium with Holes - 213.
Mochnik, G. F. (see Petukhov, B. S.) - 996.
Moizhes, B. Ia. Electrostatic Field of a Wire Grid with Square Meshes - 127.
— Calculation of the Voltage in the Kikoin-Noskov Photomagnetic Effect and the Dember Effect in Strong Magnetic Fields - 444.
— and Iu. N. Obraztsov. On the Theory of the Transverse Photomagnetic Effect - 1336.
Mokievskii, L. L. and G. A. Ivanov. The Electrical Properties of Bismuth Alloys. III. Ternary Alloys. "Reversion" to the Properties of Bismuth - 1576.
Morgulis, N. D. Thermionic Emission from Ferroelectrics - 391.
Morozov, A. I. (see Alekseeva, V. G.) - 1794.
Motiakov, V. I. Solution of Inverse Problems of Stationary Motion in Underground Hydraulics by Means of Electric-Network Models - 328.
Myzova, S. K. (see Kruglov, A. I.) - 2255.
Naboko, I. M. (see Salamandra, G. D.) - 546, 551.
Naidus, G. G. (see Cherniak, M. G.) - 2108.

Nasledov, D. N. (see Dorin, V. A.) - 74.
— (see Vinogradov, K. I.) - 1832.
Naumov, G. P. (see Lomakina, G. A.) - 1477.
Nazarchuk, M. M. (see Gerashchenko, O. A.) - 2596.
Nechai, F. On the Possibility of Measuring Refractive Indices of Crystalline Substances with an Abbe Refractometer - 2025.
Neiman, M. I. (see Bogoroditskii, N. P.) - 606.
Neizvestnyi, I. G. (see Rzhanov, A. V.) - 2274.
Nesterenko, E. G. Remarks on a Paper by D. M. Vasil'ev "A Method of Resolving the Kα-Doublet in X-Ray Lines" - 2024.
Nikerov, A. E. The Electrical Conductivity of Alloys Forming a Mechanical Mixture - 1892.
Nikitin, V. N. and B. Z. Volchek. Determination of Polymer Transition Temperature by a Polarized Infrared Spectra Method - 1499.
— (see Volchek, B. Z.) - 1705.
Nitsovich, V. M. (see Samoilovich, A. G.) - 2583.
Nosar', A. I. (see Rashba, E. I.) - 1322.
Novak, G. Crystallography of Germanium - 1544.
Novototskii-Vlasov, Iu. F. (see Rzhanov, A. V.) - 2274.
Obraztsov, Iu. N. (see Mochan, L. V.) - 213.
— (see Moizhes, B. Ia.) - 1336.
Ogarkov, B. I. Theory of Elastic Fatigue in Wood - 1016.
Omel'ianovskaia, N. M. (see Lashkarev, V. E.) - 2271.
Ornatskaia, Z. I. Electrical Properties of Some Complex Tungsten Oxides - 111.
Ostroborodova, V. V. (see Kalashnikov, S. G.) - 1789.
Ovchinnikov, E. P. (see Logunov, V. N.) - 1032, 1038.
Paleev, I. I. (see Agafonova, F. A.) - 1689.
Panarin, N. Ia. The Effect of Heat Waves on the Stressed State of a Rectangular Slab - 1019.
Parfent'ev, A. I. and V. K. Kushnarev. On Making Coercive Force Concepts More Precise - 2222.
Pargamanik, L. E. and M. Ia. Mints. The Diffusion Theory of a Magnetron (Static Regime) - 1197.
Pavinskii, P. P. (see Gross, E. F.) - 2018.
Pavlova, G. A. (see Mazurin, O. V.) - 2511.
Pekar, S. I. and V. I. Bulmistrov. The Theory of Polarons with Arbitrary Coupling Forces Between the Electrons and Optical Lattice Vibrations - 2478.
Perchuk, V.A. (see Elpat'evskaia, O. D.) - 1478.
Peshkin, M. A. On the Variation in Intensity of Change of Burning Time in the Cylinder of an Engine with Benzine and Benzole Mixtures - 969.
Petukhov, B. S. and G. F. Muchnik. On the Problem of the Hydraulic Resistance in Turbulent Nonisothermal Flow of Liquids in Tubes - 996.
Pikus, G. E. Scattering of Holes in Germanium and Silicon - 1488.
— and O. V. Sorokin. A New Method for Measuring the Intensity of a Magnetic Field - 2457.
— (see Bir, G. L.) - 419.
— (see Zhuze, V. P.) - 17, 1061.
Pilat, I. M. Electrical Properties of the Intermetallic Compound CdSb - 100.
Pimenov, Iu. V. Establishment of Steady-State Processes in a Plane Diode with an External Magnetic Field. II. - 1077.
— (see Grinberg, G. A.) - 2160.
Pines, B. Ia. On the Calculation of the Simplest Equilibrium Diagrams of Ternary Alloys. II. Some Solutions of the General Equations for the Case of Separation of Solutions Accompanied by Phase Transition - 1756.
— Diffusive Creep of Solids - 2149.
— A. F. Sirenko and N. I. Sukhinin. Sintering of Multi-Phase Bodies. III. Sintering of Mixtures Containing Low-Melting-Point Powders - 1763.
— A. F. Sirenko and N. I. Sukhinin. Some Correlations Regarding the Mechanical Strength of Materials Obtained by Sintering of Powdered Metals. III. Case When Powder Mixtures Contain Easily Fusible Components - 1773.
Pivovar, L. I., V. M. Tubaev and V. I. Gordienko. The Effect of the Electron Current Component Upon the Development of Electrical Breakdown in a High Vacuum - 909.
Plachenov, B. T. (see Boltaks, B. I.) - 2071.
Plashchinskii, N. T. (see Balygin, I. E.) - 118.
Pliat, Sh. N. Extension of Odelevskii's Theory of Generalized Conductivity to Thermal Conductivity - 2588.
Pokrovskii, Ia. E. (see Kleshchevnikova, S. I.) - 1529.
Polovin, R. V. and N. L. Tsintsadze. On Small Oscillation of an Electron Beam - 1354.
— and N. L. Tsintsadze. Longitudinal Vibrations of Electron-Ion Beams - 2429.
Plotinnikov, S. A. and L. S. Stil'bans. Investigation of the Influence of the Recombination Processes on Galvanomagnetic Effects - 23.
Popkov, V. I. The Question of Critical Corona Gradients - 372.
Popov, F. M. (see Kir'iashkina, Z. I.) - 69.
Popov, V. I. (see Kovalev, E. E.) - 1506.
Porai-Koshits, E. A. (see Boikova, A. I.) - 1023.
Porovskii, K. S. (see Balygin, I. E.) - 459.

Presniakov, A. A. On the Question of the Effect of Plastic Deformation on the Speed of Diffusion - 512.
Presnov, V. A. and V. I. Gaman. On the Dependence of the Electric Conductivity of Glass on the Electric Field Intensity - 857.
– and V. F. Synorov. The Production and Investigation of Intermetallic Compounds in Thin Films - 104.
Pshtyn, O. B. and Iu. A. Sharonov. Internal Rotation in Polymer Chains and Their Physical Properties. VII. The Configuration of Polymer Chains in Crystalline Form and in Solution - 2561.
– and Iu. A. Sharonov. Internal Rotation in Polymer Chains and Their Physical Properties. VI. Dimensions and Dipole Moments of Polyvinyl Chains with Massive Substituents - 2544.
Puchkovskii, V. V. On Approximate Relations for the Thermal Breakdown of Solid Insulators - 337.
Rabinovich, M. S. (see Danilkin, I. S.) - 1442.
Rabotnikov, Iu. L. (see Ansel'm, A. I.) - 1602.
Raikhman, S. S. (see Berman, L. S.) - 1480.
Raizer, M. D. (see Shpigel', I. S.) - 314, 349.
Rapoport, G. N. On the Problem of Wave Propagation in a Chain of Cylindrical Resonators - 1951.
Rashba, E. I. and A. I. Nosar'. Volt-Ampere Characteristics of Semiconductor Power Rectifiers - 1322.
Razbirin, B. S. (see Gross, E. F.) - 181, 1043, 1293, 2014.
Red'ko, S. G. Hardness of an Abrasive Tool - 2216.
Redozubov, D. V. On Linear Heat Problems with One Moving Boundary - 1993.
Regel', A. R. (see Ablova, M. S.) - 2021.
– (see Epar'evskaia, O. D.) - 35.
– (see Gaibullaev, F.) - 1850, 2082.
Reinov, N. M. (see Airapetiants, A. V.) - 1482.
– (see Kogan, A. V.) - 381.
Renne, V. T. and Tsyui Si-Sin. Influence of Side Chains in Aromatic Compounds on the Behavior of Mineral Oils in an Electric Field - 1351.
Reshetnikova, L. V. (see Gorbatyi, N. A.) - 282.
Riabinin, Iu. N., L. D. Livshits and L. F. Vereshchagin. The Plasticity of Brass at Superhigh Pressures - 2156.
Rodimov, B. N. Laws Governing the Magnetic Field of a Betatron - 1229.
Romanov, A. M. Ionization of Lithium on Tungsten - 1125.
– and S. V. Starodubtsev. Absorption and Ionization of Sodium by Hot Tungsten - 652.
Rovinskii, B. M. and V. G. Liutsau. Relaxation of Oriented Microstresses. I. - 309.
– and V. G. Liutsau. Relaxation of Nonoriented Microstresses. II. - 2005.
Rozovskii, M. I. On the Magnetization of Bodies in the Presence of Magnetic Viscosity - 318.
– On the Simplification of the Nonlinear Integral Equations of Slip and Relaxation for a Complex state of Stress - 2590.
Rubes, E. Production of Oriented Germanium Crystals by the Contact Method - 1538.
Rumiantseva, E. I. (see Kleshchevnikova, S. I.) - 1529.
Rusanov, V. D. (see Logunov, V. N.) - 1032, 1038.
Ryftin, Ia. A. The Mechanism of Electron Commutation in Energy-Storage Television Tubes - 1742.
Ryvkin, S. M. On the Kinetics of Photodiodes - 1558.
– A. P. Bogomazov, B. M. Konovalenko and O. A. Matveev. A Semiconducting Sensitive Element for the Detection of Gamma Radiation - 1484.
– and Iu. A. Makhalov. Distribution of the Concentration of Injected Carriers for Moving Region of Injection and Under the Action of a Field. (On a "Null" Method for Measuring Mobility). - 397.
– (see Airapetiants, A. V.) - 79, 89, 1482.
– (see Mashovets, T. V.) - 210.
Rzaev, M. A. (see Lekhtinen, G. N.) - 1114.
Rzhanov, A. V., Iu. F. Novototskii-Vlasov and L. G. Neizvestnyi. Investigation of the Field Effect and of Surface Recombination in Samples of Germanium - 2274.
Salamandra, G. D. and I. M. Naboko. Catching on a Plate Coated with a Layer of Soot as a Method for Determining the Drop-Size of an Atomized Fuel - 546.
– and I. M. Naboko. Speed Microphotography of Drops of an Atomized Liquid in Flight - 551.
Saminskii, E. M. (see Breiler, S. E.) - 2357.
Samoilovich, A. G., M. I. Klinger and V. M. Nitsovich. Interaction Between Electrons in Narrow Impurity Bands in Semiconductors - 2583.
– L. L. Korenblit. Quantum Theory of Kinetic Phenomena in Semiconductors - 2483.
– and K. D. Tovstiuk. The Energy Spectrum of Current Carriers in Semiconductors of the Germanium Type - 1629.
Savintsev, P. A. Physical Properties of Alloys and Molecular Concentration - 1149.
Sazhin, B. I. (see Mikhailov, G. P.) - 868.

Sergeeva, V. M. and E. L. Shtrum. Indium Purification and Production of an InSb Compound with High Electron Mobility - 2507.
Sekoian, S. S. (see Vereshchagin, L. F.) - 1472.
Semenov, S. S. (see Logunov, V. N.) - 1038.
Semerchan, A. A. (see Vereshchagin, L. F.) - 1472, 2451.
Shal'nikov, G. I. A Compensated High-Voltage Cathode-Ray-Tube Voltmeter - 1269.
Shalyt, S. S. Galvanomagnetic Properties of Tellurium at Low Temperatures. I. - 166.
Shandorov, G. S. The Efflux from a Canal into Stationary and Moving Media - 186.
Sharonov, Iu. A. (see Ptitsyn, O. B.) - 2544, 2561.
Sharshanov, A. A. and K. N. Stepanov. On the Propagation of Electromagnetic Waves in Almost-Periodic Wavesguides - 1362.
– (see Stepanov, K. N.) - 1734.
Shcherbakova, M. Ia. Resolving Power Calculation and Cycle Choice for a Three-Cell Radiofrequency Mass-Spectrometer - 534.
– (see Doil'nitsyn, E. F.) - 364.
Sheftel', I. T. (see Kolomiets, B. T.) - 40.
Shevchik, V. N., S. A. Suslov and Iu. D. Zharkov. Investigation of a New Type of Reflex Klystron - 340.
Shirobokov, M. Ia. (see Kholodenko, L. P.) - 851.
Shitsman, M. E. (see Miropol'skii, Z. L.) - 2196.
Shneerson, G. A. (see Aleksandrov, G. N.) - 1683.
Sholokhova, E. D. (see Smolenskii, G. A.) - 2351.
Shotov, A. P. (see Vul, B. M.) - 185, 2031.
Shpigel', I. S., M. D. Raizer and E. A. Miae. Sensitivity of a Self-Excited Oscillator - 349.
– M. D. Raizer, and E. A. Miae. Dependence of the First Signal Harmonic for Nuclear Magnetic Resonance Absorption on the Detuning Magnitude - 314.
Shtenbek, M. and P. L. Baranskii. The Motion of Minority Carriers in Germanium - 195.
– and P. I. Baranskii. An Experimental Study of the Relation Between the Peltier Effect and Thermoelectromotive Forces in Germanium - 205.
Shtrum, E. L. (see Sergeeva, V. M.) - 2507.
Shul'man, S. G. (see Ukhanov, Iu. I.) - 2332.
Shumakov, N. V. A Method for the Experimental Study of the Process of Heating a Solid Body - 771.
– (see Kudriavtsev, E. V.) - 782.
Shuppe, G. N. (see Gofman, I. L.) - 2471.
– (see Gorbatyi, N. A.) - 262.
Shustrov, B. N. (see Mamyrin, B. A.) - 1246.
Sidorov, A. I. (see Iglitsyn, M. L.) - 2289, 2292.
Sidorov, E. A. Calculation of Laminar Flow of Drop-Forming Liquids Through Tubes, with Inclusion of Non-Isothermal Effects - 292.
– On the Relation of Surface Friction and Heat Transfer - 499.
Sidorovich, E. A. (see Kuvshinskii, E. V.) - 632.
Sirenko, A. F. (see Pines, B. Ia.) - 1763, 1773.
Skanavi, G. I. and A. M. Kashtanova. Preparation and Study of Dielectric Properties of a Group of Glasses with Increased Permittivity - 1645.
– (see Gubkin, A. N.) - 1825.
Skopenko, A. I. (see Kvasnitskaia, A. N.) - 393.
Slabospitskii, R. P. (see Fogel', Ia. M.) - 897, 902.
Slivkov, I. N. Mechanism for Electrical Discharge in Vacuum - 1928.
Slutsker, A. I. (see Zhurkov, S. N.) - 1287.
Smirnov, A. G. Free Heat Convection of Mercury in Closed Circular Tubes - 2209.
Smirnov, B. G. (see Gofman, I. L.) - 2471.
Smirnov, B. I. Changes in X-Ray Line Intensities on Deforming Polycrystals - 193.
– (see Tsobkallo, S. O.) - 1780.
Smirnov, I. A. (see Deviatkova, E. D.) - 1805.
Smirnov, L. S. Measurement of Short Lifetimes of Charge Carriers in Germanium - 2299.
– and V. S. Vavilov. On the Probability of Recombination Capture of Charge Carriers by Frenkel Defects in n-Type Germanium - 387.
Smolenskii, G. A. On the Occurrence of Spontaneous Polarization in Crystals - 1652.
– V. A. Isupov, A. I. Agranovskaia and E. D. Sholokhova. Nonferroelectric Phase Transitions in Solid Solutions Formed in the Systems (Ca, Sr) (Ti, Zr)O_3 and Na (Nb, Ta)O_3 - 2351.
Sobolev, N. D. On the Nature of Initial Rupture - 2112.
Sochava, L. S. (see Bogomolov, V. N.) - 188.
Sokolov, I. A. (see Airapetiants, A. V.) - 1482.
– (see Kogan, A. V.) - 381.
Sokol'skaia, I. L. On Intermetallic Alloys of Platinum and Gold with Alkali and Alkaline Earth Metals - 108.
Solodovnikov, A. A. (see Grenishin, S. G.) - 231.
Soltitskii, B. P. and A. L. Kartuzhanskii. Measurement of Extremely Small α-Emitter Concentrations in Vegetable Objects Using Thick Photographic Emulsions - 540.
Sorokin, O. V. A Method for Measuring the Volume Lifetime and the Diffusion Coefficient of Current Carriers by Measuring the Resistance of a Semiconductor in a Magnetic Field - 2572.
– (see Pikus, G. E.) - 2457.
– (see Zhuze, V. P.) - 17, 1061.
Spirin, G. S. (see Gofman, I. L.) - 2471.
Stafeev, V. I. Amplification of Minority Carrier Current in Nonideal p-n Junctions - 2037.
Starik, A. M. (see Golubchin, G. N.) - 1935.
Starodubtsev, S. V. (see Romanov, A. M.) - 652.

Stavitskaia, T. S. (see Airapetiants, S. V.) - 2009.
- (see Gershtein, E. Z.) - 2302.
- (see Kolomoets, N. V.) - 59.
Stel'makh, M. F. (see Kogan, A. V.) - 381.
Stepanov, K. N. and A. A. Sharshanov. Hard Focusing in Linear Electron Accelerators - 1734.
- (see Sharshanov, A. A.) - 1362.
Stil'bans, L. S. On the "Commutation" of Semiconducting Thermoelements - 186.
- (see Airapetiants, S. V.) - 2009.
- (see Gershtein, E. Z.) - 2302.
- (see Kolomoets, N. V.) - 59.
- (see Lekhtinen, G. N.) - 1114.
- (see Poltinnikov, S. A.) - 23.
Strikha, V. I. (see Lashkarev, V. E.) - 2271.
Strunin, R. I. (see Bogomolov, V. N.) - 188.
Sukhinin, N. I. (see Pines, B. Ia.) - 1763, 1773.
Sul'zhenko, L. L. (see Votinov, M. O.) - 2143.
Suslov, S. A. (see Shevchik, V. N.) - 340.
Svechnikov, S. V. On Certain Comparative Characteristics of the PSK-M and PS-K Photoconductors When Exposed to X-Rays - 588.
- On the Determination of the Parameters of Silver-Sulfide Barrier-Layer Photoelectric Elements - 837.
- Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation. I. Static Characteristics - 2320.
- Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation. II. Kinetic Aspects - 2328.
- and V. T. Aleksandrov. Certain Photoelectric Properties of CdSe and CdTe Monocrystals - 842.
Synorov, V. F. (see Presnov, V. A.) - 104.
Sysoeva, L. M. (see Airapetiants, S. V.) - 2009.
Sytaia, E. P. (see Gorbatyi, N. A.) - 262.
Takhtareva, N. K. (see Borshchevskii, A. S.) - 1301.
Tarasov, V. V. Atom Chains and Fine Structure of Glass - 1407.
- On the Temperature Factor e^{-2M} in the Intensity of the Bragg Maxima in the Case of Chain-Structure Crystals - 2232.
Temko, V. K. (see Adirovich, E. I.) - 1068.
Tenenbaum, M. M. Testing the Scratch Resistance of Metals - 1006.
Terminasov, Iu. S. (see Gal'perin, E. L.) - 1276.
Tikhodeev, N. N. (see Aleksandrov, G. N.) - 389.
Timofeev, A. D. and Ia. M. Fogel'. The Separation of an Atomic Beam into Components with Oriented Electron Shell Spins, Using an Exponential Magnetic Field - 1974.
Timofeeva, G. G. Pinch Effect and Breaking of the Arc in the Constriction - 2480.
Tiutiunnikova, E. V. (see Voitsekhovskaia, I. A.) - 1474.
Tkalich, L. G. (see Iordanishvili, E. K.) - 1109.
Tolpygo, K. B. Variation of the Emissivity of a p-n Junction with its Structure and Operating Conditions - 809.
- (see Deigen, M. F.) - 1513.
- (see Gribnikov, Z. S.) - 555, 2074.
- (see Kaplunova, E. L.) - 2087.
Tomashevskii, E. E. (see Zhurkov, S. N.) - 1140.
Tovstiuk, K. D. (see Samoilovich, A. G.) - 1629.
Trubetskoi, A. L. (see Doil'nitsyn, E. F.) - 364.
Tseitlin, L. A. On a Possible Method for Obtaining a Homogeneous Magnetic Field - 2592.
Tsidil'kovskii, I. M. The Nernst-Ettingshausen Effect in Strong Magnetic Fields - 9.
- The Nernst-Ettingshausen Effect in Mercury Telluride - 1622.
Tsigelka, I. (see Gusa, V.) - 880.
Tsintsadze, N. L. (see Polovin, R. V.) - 1354, 2429.
Tsobkallo, S. O. and B. I. Smirnov. X-Ray Study of Lattice Strains in Aluminum Deformed at Liquid-Nitrogen Temperature - 1780.
Tsukerman, V. A. and M. A. Manakova. Sources of Short X-Ray Pulses for Investigating Fast Processes - 353.
Tsyrlin, L. E. Remarks on Popkov's Article "Theory of the Direct Current Bipolar Corona." - 376.
- Condition for the Preservation of the Geometrical Pattern of the Electrostatic Field on the Appearance of a Space Charge - 1470.
Tsyui Si-Sin, (see Renne, V. T.) - 1351.
Tubaev, V. M. (see Pivovar, L. I.) - 909.
Tverdokhlebov, V. I. Connection Between the Langmuir Probe-Characteristic Method and the Two-Probe Method for the Determination of Electron Temperature - 681.
Tverskoi, N. P. (see Bazilevich, V. V.) - 1696.
Ufimtsev, P. Ia. Approximate Computation of the Diffraction of Plane Electromagnetic Waves at Certain Metal Bodies. I. Diffraction Patterns at a Wedge and a Ribbon - 1708.
Ukhanov, Iu. I. Modulation of Infrared Radiation in Germanium at Low Temperatures - 1536.
- The Frequency Response of Germanium Diode Modulators to Infrared Radiation - 1810.
- and S. G. Shul'man. Effect of Strong Electrical Field on Transparancy of Germanium Diode - 2332.
Usachev, E. P. (see Makovskii, F. A.) - 2585.
Ust'ianov, V. I. (see Konozenko, I. D.) - 1567.
Utkin, K. G. (see Kel'man, V. M.) - 1938.
Vainshtein, L. A. The Method of Approximate Separation of Variables and its Application to Boundary Value Problems of Electrodynamics and Acoustics - 1955.

– Electron Waves in Periodic Structures - 2176.
– Group Velocity of Damped Waves - 2420.
Valeev, Kh. S., N. G. Drozdov and A. L. Frumkin. Some Investigations on Li-Zn Ferrites - 2341.
– and M. D. Mashkovich. Nonlinear Semiconductors Based Upon $ZnO-TiO_3$ - 1533.
Vandakurov, Iu. V. An Investigation of Axially Symmetric Magnetic Fields for Focusing a Three-Dimensional Beam with a Spiraling Central Trajectory of Slowly-Changing Radius - 1217.
– On the Theory of Aberrations in Electron-Optic Focusing Systems with a Curvilinear Axis - 1719.
Vasil'ev, V. D. (see Bogomolov, V. N.) - 229.
Vasserman, I. I. A Resonance Method for Determining the Electron Concentration and Number of Collisions in a Gas Discharge Plasma - 461.
Vaulin, E. P. On the Temperature of a Flat Plate Across which Flows a Reacting Gas Mixture - 1390.
Vavilov, V. S. (see Smirnov, L. S.) - 387.
Veller, S. Ia. and V. I. Likhtman. Laws Governing Lubrication when Metals are Worked Under Pressure - 989.
Vengel', T. N. and B. T. Kolomiets. Vitreous Semiconductors; Some Properties of Materials in the $As_2Se_3 - As_2Te_3$ System. II. - 2314.
Vereshchagin, L. F., A. A. Semerchan, F. M. Filler and V. A. Galaktionov. Effect of the Reservoir on the Flow of a Stream of Water at Supersonic Speed - 2451.
– A. A. Semerchan, M. V. Maslennikov and S. S. Sekoian. On the Problem of Friction of a Stream of Water Against the Walls of a Nozzle at Ultrasonic Speeds - 1472.
– (see Riabinin, Iu. N.) - 2156.
Viatkin, A. P. The Problem Involved in Determining the Causes Which Give Rise to the Spread in the Values of Transistor Parameters. I. Transistors of the p-n-p Type - 1092.
– and V. A. Eichin. The Problem Involved in Determining the Causes Which Give Rise to the Spread in the Values of Transistor Parameters. II. Transistors of the n-p-n Type - 1099.
Vinogradov, D. N. and R. A. Kazarian. Realization of a Constant Phase Difference Over a Prescribed Frequency Range - 514.
Vinogradov, K. L., V. V. Galavanov and D. N. Nasledov. Production of High-Purity Indium Antimonide by Zone Fusion - 1832.
Vlasov, K. P. Concerning a Method for Determining the Turbulent Speed of Propagation of a Flame - 303.
Vodakov, Iu. A. (see Lomakina, G. A.) - 1477.
Voitsekhovskaia, I. A., L. A. Golubeva and E. V. Tiutiunnikova. On the Problem of Relaxation Dielectric Losses in Ionic Crystals (Preliminary Communication) - 1474.
Volchek, B. Z. and V. N. Nikitin. Study of Polyamides in Polarized Infrared Light - 1705.
– (see Nikitin, V. N.) - 1499.
Volosok, V. I. and B. V. Chirikov. Space Charge Compensation in an Electron Beam - 2437.
Vorob'ev, A. A. (see Bochagov, B. A.) - 1458.
Voroniuk, P. I. (see Klinger, M. I.) - 1491.
Votinov, M. P. and E. V. Kuvshinskii. Thermoelastic Phenomena in SKS-30A and SKB Rubbers in Adiabatic Deformation up to the Breaking Point - 2139.
– and E. V. Kuvshinskii. Laws Governing the Conversion of Work into Heat in the Adiabatic Deformation of Butyl Rubber Vulcanizates - 2375.
– L. L. Sul'zhenko and E. V. Kuvshinskii. Thermoelastic Phenomena in Rubbers Based on Natural Latex During Cyclic Deformation - 2143.
Vul, B. M. and A. P. Shotov. Surface Discharges in Electron-Hole Junctions - 185.
– and A. P. Shotov. Edge Breakdown of p-n Junctions in Germanium - 2031.
Zakgeim, L. N. Design of Flat Anode for a Porous Tantalum Electrolytic Capacitor - 1667.
Zakharchenia, B. P. (see Gross, E. F.) - 1802, 2018.
Zakhavaeva, N. N. (see Deriagin, B. V.) - 980.
Zandberg, E. Ia. Surface Ionization of Potassium Atoms and KCl and CsCl Molecules on Tungsten Filaments in Electric Fields up to 2 Mv/cm - 2399.
Zatsepin, N. N. Experimental Investigation of the Magnetic Field Produced by Artifical Surface Defects on a Ferromagnetic Body - 332.
Zharinov, A. Study of the Transverse Motion of Ions in a Discharge in a Strong Longitudinal Magnetic Field - 1675.
Zharkov, Iu. D. (see Shevchik, V. N.) - 340.
Zhidkov, V. A. and V. E. Lashkarev. The Electrical State and Diffusion of Thermal Acceptors in Germanium - 803.
Zhilin, V. N. Theory of Operation of a Receiver for Multiplex Cyclic Telemetry - 2226.
Zhurkov, S. N. and A. I. Slutsker. Very-Low-Angle Scattering of X-Rays by Submicroscopic Imperfections - 1287.
– and E. E. Tomashevskii. Microscopic Investigation of Crack Propagation on Rupture - 1140.
Zhuze, V. P., G. E. Pikus and O. V. Sorokin. On the Question of the Effect of an External Electrostatic Field on the Surface Recombination Rate in Germanium - 17.

– G. E. Pikus and O. V. Sorokin. A Method for Measuring the Rate of Surface Recombination in Accordance with the Variation of the Resistance of a Semiconductor in a Magnetic Field - 1061.
Zobnina, B. N. (see Alekseeva, V. G.) - 190.
Zonn, Z. N. (see Ioffe, V. A.) - 1840.
Zozulia, Iu. L (see Klinger, M. L.) - 2123.

Soviet Physics – Technical Physics: Analytical Subject Index For Vol. 2, 1957

(Russian Original Vol. 27, 1957, Journal of Technical Physics (USSR))

References with L are Letters to the Editor. References with BC are Brief Communications.
Items are listed under the following categories:

Apparatus
Combustion
Crystals and Crystal Growth
Dielectrics and Dielectric Breakdown in Insulators
Diffusion
Editorial
Elasticity and Inelasticity
Electrical Circuits and Networks
Electrical Conductivity
Electrical Contacts
Electrical Discharges
Electromagnetic Waves
Electron and Ion Optics
Electron and Ion Beams
Electron Emission
Electrostatics
Errata
Explosives and Explosions
Ferroelectricity
Ferromagnetic Materials and Ferrites
Fluid Dynamics
Fluid Flow, Low Speed
Fracture
Friction and Wear
Glass
Liquids
Magnetic Resonance
Magnetism
Mass Spectrometry
Metallurgy
Nuclear Physics and Instrumentation
Nuclear Reactor
Optical Properties
Phase Transformations
Piezoelectricity
Plasmas
Plastic Deformation
Polymers
Radiation Effects in Solids
Radioactivity
Rheology
Semiconductor Devices
Semiconductors
Shock Waves
Sound Waves
Space Charge
Spectra and Spectroscopy; Gas Analysis
Surface Properties
Thermal Conductivity and Thermal Conduction; Heat Transfer
Thermodynamics Properties and Thermodynamics
Thermoelectricity
Thin Films
Transmission Lines and Wave Guides
Turbulence
Vibrations
Viscosity and Viscoelasticity
X-Rays and X-Ray Diffraction

Apparatus

A Compensated High-Voltage Cathode-Ray-Tube Voltmeter, G. I. Shal'nikov - 1269.

A Fast-Acting Wilson Chamber Synchronized with a Synchrotron, I. P. Iavor and A. P. Komar - 794.

A Linear-Detector Measuring Device Based on the Hall Effect, V. N. Bogomolov and V. D. Vasil'ev - 229.

Degree of Purification of Hydrogen and Helium by a Chromatographic Process on Activated Carbon, N. A. Brilliantov and A. B. Fradkov - 2239.

Design of Radiation Bolometers, M. I. Kornfel'd - 2462.

Hardness of an Abrasive Tool, S. G. Red'ko - 2216.

Installation for Measuring the Hall Effect in Semiconductors, V. N. Bogomolov and V. A. Miasnikov - 1103.

Investigation of a New Type of Reflex Klystron, V. N. Shevchik, S. A. Suslov and Iu. D. Zharkov - 340.

Low-Inertia Germanium Bolometers, V. N. Bogomolov, Iu. V. Ilisavskii, M. Kornfel'd, L. S. Sochava and R. L. Strunin - 188.

Radiofrequency Mass-Spectrometer, E. F. Doil'nitsyn, A. L. Trubetskoi and M. Ia. Shcherbakova - 364.

Shape of the Electron-Pulse in an Ionization Chamber, V. A. Dmitriev - 179.

Simple Design for a Rubber-Sheet Apparatus for Determining the Trajectories of Charged Particles in the Presence of Space Charge, V. M. Kel'man, K. G. Utkin and L. N. Loginova - 1938.

Combustion

Concerning a Method for Determining the Turbulent Speed of Propagation of a Flame, K. P. Vaslov - 303.

On the Variation in Intensity of Change of Burning Time in the Cylinder of an Engine with Benzine and Benzole Mixtures, M. A. Peshkin - 969.

Crystals and Crystal Growth

Absorption Edge Spectra in Cadmium Sulfide Crystals and their Relation to Crystal Surface and Deformation, E. F. Gross and B. S. Razbirin - 2014.

A Hydrogen-Like Series of Lines in the Spectrum of a Cadmium Sulfide Crystal at the Fundamental Absorption Edge, E. F. Gross and B. S. Razbirin - 1293.

A Study of the Effect of Unilaterial Compression on the Dielectric Permeability of Ceramic $BaTiO_3$ in Strong Fields, L. A. Izhak - 872.

Changes in X-Ray Line Intensities on Deforming Polycrystals, B. I. Smirnov - 193.

Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation, I. Static Characteristics, S. V. Svechnikov - 2320.

Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation.II. Kinetic Aspects, S. V. Svechnikov - 2328.

Crystallography of Germanium, G. Novak - 1544.

Diamagnetic Zeeman Effect and Exciton Structure in the Crystal of Cuprous Oxide, E. F. Gross and B. P. Zakharchenia - 1802.

Dielectric Polarization of Cadmium Niobate and Certain Related Solid Solutions, V. A. Isupov and O. K. Khomuteskii - 2513.

Effect of Wetting the Surfaces of Ionic Crystals on the Development of One of the Equivalent Dodecahedral Glide Systems During Linear Deformation, V. P. Bobrikov - 758.

Equilibrium and Nonequilibrium Electrical Properties of Polycrystalline Selenium, P. T. Kozyrev - 27.

Growing $BaTiO_3$ Single Crystals, A. M. Cherepanov - 2119.

Interaction of an Impurity Center Electron with the Acoustic Vibrations of a Uniaxial Crystal, L. I. Korovin - 828.

Line-Like Spectrum at the End of the Fundamental Absorption, and the Structure of Cadmium Sulfide Crystals, E. F. Gross, B. S. Razbirin and M. A. Iakobson - 181.

Line Spectrum of the Main Absorption Edge of Crystals of Cadmium Sulfide, E. F. Gross, B. S. Razbirin and M. A. Iakovson - 1043.

Measurement of the Lifetime in Monocrystalline Silicon, M. I. Iglitsyn, Iu. A. Kontsevoi and V. D. Kudin - 1316.

On the Occurrence of Spontaneous Polarization in Crystals, G. A. Smolenskii - 1652.

On the Temperature Factor e^{-2M} in the Intensity of the Bragg Maxima in the Case of Chain-Structure Crystals, V. V. Tarasov - 2232.

On the Theory of the Fast Polaron, Iu. I. Gorkun - 1639.

On the Question of the Effect of an External Electrostatic Field on the Surface Recombination Rate in Germanium, V. P. Zhuze, G. E. Pikus and O. V. Sorokin - 17.

On the Question of the Effect of Anharmonicity on Vibrations and Waves in Crystal, (Linear Atomic Chain), A. I. Ansel'm and Iu. L. Rabotnikov - 1602.

Preparation of Pure Silicon by Thermal Decomposition of Silane, S. I. Kleshchevnikova, Ia. E. Pokrovskii and E. I. Rumiantseva - 1529.

Production of Oriented Germanium Crystals by the Contact Method, E. Rubes - 1538.

Solution of the Problem of Solidification of a Sphere, Taking into Account the Variation of the Temperature at the Crystallization Front During the Process of Solidification, L. G. Kachurin - 485.

Some Features of the Electrical Properties of HgSe-HgTe Films, O. D. Elpat'evskaia and A. R. Regel' - 35.

Temperature Dependence of Spectral Absorption in Silver Bromide Crystals, S. G. Grenishin and A. A. Solodovnikov - 231.

The Method of Traces in the Exciton Problem, I. M. Dykman - 1609.

Dielectrics and Dielectric Breakdown in Insulators

A Study of the Effect of Unilaterial Compression on the Dielectric Permeability of Ceramic $BaTiO_3$ in Strong Fields, L. A. Izhak - 872.

An Investigation of the Dielectric Permittivity of Semiconductors, Z. I. Kir'iashkina, F. M. Popov, D. N. Bilenko and V. I. Kir'iashkin - 69.

An Investigation of the Pulse Breakdown of Gases and the Rate of Development of Electron Avalanches, A. Z. Efendiev - 921.

Application of the New Theories of Polarization to the Calculation of Effective Dipole Moments of Polar Systems, L. L. Burshtein and G. P. Mikhailov - 617.

Artificial Anisotropic Dielectrics, I, N. A. Khizhniak - 1858.

Artificial Anisotropic Dielectrics, II, N. A. Khizhniak - 1865.

Artificial Anisotropic Dielectrics, III, N. A. Khizhniak - 1877.

Dielectric Permeability of Compounds Close to $BaTiO_3$ in the $BaO-MgO-TiO_2$ System, V. A. Isupov - 1501.
Effect of Electrode Metal on Insulation Aging of Ceramic Dielectrics, I. E. Balygin and K. S. Porovskii - 459.
Electrical Conductivity of Ceramic Meterials in Strong Electric Fields, I. E. Balygin and N. T. Plashchinskii - 118.
Insulating Liquids Breakdown with Restricted Discharge Channel Currents, I. E. Balygin - 2129.
Investigation of Dielectric Losses in Insulating Papers, N. N. Kaliazina - 2524.
Investigation of Electron-Reflection by Dielectrics, T. L. Matskevich - 255.
Nature of the Dielectric Loss in Soda – Alumina Silicate Glasses, V. A. Ioffe - 1344.
Nonferroelectric Phase Transitions in Solid Solutions Formed in the Systems (Ca, Sr) $(Ti, Zr)O_3$ and $Na(Nb, Ta)O_3$, G. A. Smolenskii, V. A. Isupov, A. I. Agranovskaia, and E. D. Sholokhova - 2351.
On Approximate Relations for the Thermal Breakdown of Solid Insulators, V. V. Puchkovskii - 337.
On Certain Peculiarities of the Dielectric Losses of Polycaprolactam, G. P. Mikhailov, B. I. Sazhin and N. N. Kuprilanchik - 868.
On the Problem of Raising the Thermal Breakdown Potential of Metallized Paper Capacitors, Z. V. Briukhina - 1887.
On the Problem of Relaxation Dielectric Losses in Ionic Crystals (Preliminary Communication), I. A. Voitsekhovskaia, L. A. Golubeva and E. V. Tiutiunnikova - 1474.
Preparation and Study of Dielectric Properties of a Group of Glasses with Increased Permittivity, G. I. Skanavi and A. M. Kashtanova - 1645.
Selection of the Shape of Specimens for Breakdown Test of Ceramic Dielectric Materials, K. E. Medvedev - 2245.
Some Aspects of Dendrite Growth on Rock Salt at 200 and 300°C, I. E. Balygin - 1121.
The Anomalous Stabilities of New Inorganic Polycrystalline Electrets, A. N. Gubkin and G. I. Skanavi - 1825.
The Mechanical Strengths of Radio Ceramics as a Function of Their Heat Treatment, N. P. Bogoroditskii, G. V. Bois, M. N. Kozlovskaia and M. I. Neiman - 606.
The Phenomenological Theory of Electrets, A. N. Gubkin - 1813.

Diffusion

Diffusion and Solubility of Iron in Germanium, A. A. Bugai, V. E. Kosenko and E. G. Miseliuk - 183.
Diffusion and Solubility of Silver in Germanium, A. A. Bugai, V. E. Kosenko and E. G. Miseliuk - 1553.
Diffusive Slip and Convective Diffusion of a Gas in a Capillary, R. Ia. Kucherov - 2001.
On the Diffusion of Indium, Antimony and Tellurium in Indium Antimomide, B. I. Boltaks and G. S. Kulikov - 67.
On the Influence of Convection on Diffusion, V. B. Fiks - 1176.
On the Question of Molecular Gas Flow Through a Porous Membrane, S. P. Bakanov - 1503.
On the Question of the Effect of Plastic Deformation on the Speed of Diffusion, A. A. Presniakov - 512.
Self- Diffusion in Selenium, B. I. Boltaks and B. T. Plachenov - 2071.
The Electrical State and Diffusion of Thermal Acceptors in Germanium, V. A. Zhidkov and V. E. Lashkarev - 803.
The Kinetic Equations of Gas Dissociation Including Diffusion, A. I. Gubanov and Iu. P. Lun'kin - 2443.
Theory of the Flow of a Gas in a Porous Material in the Near-Knudsen Region, B. V. Deriagin and S. P. Bakanov - 1904.

Editorial

Technical Physics in the Soviet Union, A. F. Ioffe - 2267.

Elasticity and Inelasticity

Effect of the Molecular Weight of Rubber on the Dynamic Mechanical Properties of Rubbers (Vulcanizates), E. V. Kuvshinskii and M. M. Fomicheva - 929.
Relaxation of Oriented Microstresses, I. B. M. Rovinskii and V. G. Liutsau - 309.
The Effect of Vulcanization on the Dynamic Elastic Properties of Rubber, E. V. Kuvshinskii and E. A. Sidorovich - 632.
Theory of Elastic Fatigue in Wood, B. I. Ogarkov - 1016.
Thermoelastic Phenomena in Rubbers Based on Natural Latex During Cyclic Deformation, M. P. Votinov, L. L. Sul'zhenko and E. V. Kuvshinskii - 2143.
Thermoelastic Phenomena in SKS-30A and SKB Rubbers in Adiabatic Deformation up to the Breaking Point, M. P. Votinov and E. V. Kuvshinskii - 2139.

Electrical Circuits and Networks

Application of Harmonic Electron Oscillations for Generating Ultrahigh Frequencies, P. A. Borodovskii - 2189.

Investigation of a New Type of Reflex Klystron, V. N. Shevchik, S. A. Suslov and Iu. D. Zharkov - 340.

On a Method for Measuring and Registering "Ultra-Small" Currents, L. L. Dekabrun - 1461.

On the Determination of the Parameters of Silver-Sulfide Barrier-Layer Photoelectric Elements, S. V. Svechnikov - 837.

Regarding a Paper by B. I. Iakhinson, G. I. Atabekov - 380.

Regarding the Letter of Doctor of Technical Sciences Professor G. I. Atabekov, B. I. Iakhinson - 383.

Sensitivity of a Self-Excited Oscillator, I. S. Shpigel', M. D. Raizer and E. A. Miac - 349.

Solution of Inverse Problems of Stationary Motion in Underground Hydraulics by Means of Electric-Network Models, V. I. Motiakov - 328.

Theory of Operation of a Receiver for Multiplex Cyclic Telemetry, V. N. Zhilin - 2226.

Electrical Conductivity

Electrical Conductivity of Ceramic Materials in Strong Electric Fields, I. E. Balygin and N. T. Plashchinskii - 118.

Electrical Properties of Some Complex Tungsten Oxides, Z. I. Ornatskaia - 111.

Electrical Properties of Some Compound Oxide Semiconductors, B. T. Kolomiets, I. T. Sheftel' and E. V. Kurlina - 40.

Electrical Properties of the Intermetallic Compound CdSb, L. M. Pilat - 100.

Equilibrium and Nonequilibrium Electrical Properties of Polycrystalline Selenium, P. T. Kosyrev - 27.

Neutralization Reduction of Electrical Conductivity in Silica Glasses, O. V. Mazurin and E. S. Borisovskii - 243.

On the Dependence of the Electric Conductivity of Glass on the Electric Field Intensity, V. A. Presnov and V. I. Gaman - 857.

Some Characteristics of Temperature Dependence of Electrical Conductivity of Single Phase Solutions of Ag—Au, In—Pb and Bi—Sb Systems in the Solid and Liquid States, F. Gaibullaev and A. R. Regel' - 2082.

The Electrical and Thermal Conductivities, Thermoelectric Power, Hall and Nernst Constants of Amorphous Substances with Electron Conductivity, A. I. Gubanov - 1.

The Electrical Conductivity of Alloys Forming a Mechanical Mixture, A. E. Nikerov - 1892.

Electrical Contacts

Effect of Surface Treatment on the Properties of Copper-Oxide Rectifiers, F. A. Makovskii and E. P. Usachev - 2585.

On the Dependence of the Electrical Erosion of Metals on the Impulse Energy, A. I. Kruglov, S. K. Mymova and L. P. Korobova - 2255.

The Electrification Observed After the Contact of Two Bodies, M. M. Bredov and I. Z. Kshemianskaia - 844.

Electrical Discharges

A Remark on I. M. Chapnik's Theory of the Striated Positive Column, M. V. Koniukov - 1927.

AC-Corona Characteristics of Split Conductors, G. N. Aleksandrov and G. A. Shneerson - 1683.

An Investigation of the Angular Distribution of Secondary Ions Produced by the Ionization of Gas Atoms by Positive Ions, V. V. Afrosimov and N. V. Fedorenko - 2391.

An Investigation of the Breakdown Potential of a High-Frequency Plasma in the Frequency and Pressure Transition Regions, S. M. Levitskii - 887.

An Investigation of the Energy of Multi-Charged Ions Produced by the Ionization of Gas Atoms by Positive Ions, V. V. Afrosimov and N. V. Fedorenko - 2378.

An Investigation of the Pulse Breakdown of Gases and the Rate of Development of Electron Avalanches, A. Z. Efendiev - 921.

Effectiveness of the Auxiliary Discharge in Wide-Band TR-Tubes as a Function of Position of the Keep-Alive Electrode, G. N. Golubchin and A. M. Starik - 1935.

Formation of a Pulsed Discharge in Argon at Ultra-High Frequencies, I. Electron-Velocity Distribution Function, V. E. Golant - 684.

Insulating Liquids Breakdown with Restricted Discharge Channel Currents, I. E. Balygin - 2129.

Initiation of Pulsed Discharge in Argon at Ultra-High Frequencies, III. Initiation of the Discharge Under the Action of an Exponentially Increasing High-Frequency Power, V. E. Golant - 1919.

Measurement of the Temperature of High Pressure Electric Arc in a Pneumatic Switch by a Method Based on the Plugging of the Nozzle, V. Gusa and I. Tsigelka - 880.

Mechanism for Electrical Discharge in Vacuum, I. N. Slivkov - 1928.

On One Erroneous Hypothesis in the Corona Theory, G. N. Aleksandrov and N. N. Tikhodeev - 369.
Pinch Effect and Breaking of the Arc in the Constriction, G. G. Timofeeva - 2480.
Plasma Penetration in a Mercury-Vapor Discharge, M. D. Gabovich and E. T. Kucherenko - 266.
Production of a Pulsed Discharge in Argon at Ultra-High Frequencies, II. Production of a Discharge by Retangular Power Pulses, V. E. Golant - 699.
Remarks on Popkov's Article "Theory of the Direct Current Bipolar Corona.", L. E. Tsyrlin - 376.
Space Potential and Electrode Sputtering in a High Frequency Discharge, S. M. Levitskii - 913.
The Effect of the Electrical Breakdown in a High Vacuum, L. I. Pivovar, V. M. Tubaev and V. I. Gordienko - 909.
The Theory of the Striated Positive Column in the Case of Dominance of Volume Recombination, I. M. Chapnik - 894.
The Question of Critical Corona Gradients, V. I. Popkov - 372.

Electromagnetic Waves

A New Method for Solving Problems Related to the Diffraction of Electromagnetic Waves by a Plane with an Unbounded Straight Slit, G. A. Grinberg - 2410.
Approximate Computation of the Diffraction of Plane Electromagnetic Waves at Certain Metal Bodies, I. Diffraction Patterns at a Wedge and a Ribbon, P. Ia. Ufimtsev - 1708.
Group Velocity of Damped Waves, L. A. Vainshtein - 2420.
On the Inclusion of the Effect of the Thickness of the Screen in Certain Diffraction Problems, A. N. Akhiezer - 1190.
On the Propagation of Electromagnetic Waves in Almost-Periodic Waveguides, A. A. Sharshanov and K. N. Stepanov - 1362.
On the Theory of the Propagation of Electromagnetic Waves in Media with Random Inhomogeneities in the Index of Refraction, V. V. Merkulov - 958.
On the Question of Diffraction of Electromagnetic Waves from Infinitesimally Thin Ideally Conducting Plane Screens, G. A. Grinberg and Iu. V. Pimenov - 2160.

Electron and Ion Optics

Hard Focusing in Linear Electron Accelerators, K. N. Stepanov and A. A. Sharshanov - 1734.
Interaction of an Impurity Center Electron with the Acoustic Vibrations of a Uniaxial Crystal, L. I. Korovin - 828.
On the Theory of Aberrations in Electron-Optic Focusing Systems with a Curvilinear Axis, Iu. V. Vandakurov - 1719.
The Electrostatic Field of an Immersion Electron Lens Formed by Two Diaphragms, N. N. Lebedev - 1943.

Electron and Ion Beams

An Investigation of Axially Symmetric Magnetic Fields for Focusing a Three-Dimensional Beam with a Spiraling Central Trajectory of Slowly-Changing Radius, Iu. V. Vandakurov - 1217.
Formation of Negative Hydrogen Ions on Passage of Positive Hydrogen Ions Through a Supersonic Stream of Oil Vapors, Ia. M. Fogel', L. I. Krupnik and R. P. Slabospitskii - 897.
Investigation of Electron-Reflection by Dielectrics, T. L. Matskevich - 255.
Longitudinal Vibrations of Electron-Ion Beams, R. V. Polovin and N. L. Tsintsadze - 2429.
On Small Oscillation of an Electron Beam, R. V. Polovin and N. L. Tsintsadze - 1354.
Passage of Positive Ions of Lithium Through Thin Evaporated Layers of Aluminum, V. V. Beliakova and M. A. Mittsev - 729.
Space Charge Compensation in an Electron Beam, V. I. Volosok and B. V. Chirikov - 2437.
The Composition of the Equilibrium Beam Formed by the Passage of Singly-Charged Positive Oxygen Ions Through Gas Targets, Ia. M. Fogel', L. I. Krupnik, A. G. Koval', and R. P. Slabospitskii - 902.
The Separation of an Atomic Beam into Components with Oriented Electron-Shell Spins, Using an Exponential Magnetic Field, A. D. Timofeev and Ia. M. Fogel' - 1974.
Thermal Conversion of Germanium when it is Irradiated by an Electron Beam, L. A. Balabanova and M. M. Bredov - 1295.

Electron Emission

Absorption and Ionization of Sodium by Hot Tungsten, A. M. Romanov and S. V. Starodubtsev - 652.
Auto-Electronic Emission from Cadmium Sulfide and Cadmium Selenide, A. I. Klimin - 649.
Connection Between the Langmuir Probe-Characteristic Method and the Two-Probe Method for the Determination of Electron Temperature, V. I. Tverdokhlebov - 681.
Electrostatic Emission from a Tantalum Single Crystal, N. A. Gorbatyi, L. V. Reshetnikova, E. P. Sytaia and G. N. Shuppe - 262.
Establishment of Steady-State Processes in a Plane Diode with an External Magnetic Field, II. Iu. V. Pimenov - 1077.

Ionization of Lithium on Tungsten, A. M. Romanov - 1125.
On Electrostatic Electron Emission of Semiconductors, I. I. Gofman, B. G. Smirnov, G. S. Spirin and G. N. Shuppe - 2471.
Shape of the Electron-Pulse in an Ionization Chamber, V. A. Dmitriev - 179.
Study of the Transverse Motion of Ions in a Discharge in a Strong Longitudinal Magnetic Field, A. Zharinov - 1675.
The Emission Properties of Aluminum Oxide at High Temperatures, V. Ia. Frenkel' - 2192.
The Mechanism of Electron Commutation in Energy-Storage Television Tubes, Ia. A. Ryftin - 1742.
The Origin of a Pulse Discharge in Neon at Ultra-High Frequencies, V. E. Golant - 1370.
The Role of Reflected Electrons in Secondary Electron Emission, L. N. Dobretsov and T. L. Matukevich - 663.
Thermionic Emission from Ferroelectrics, N. D. Morgulis - 391.

Electrostatics

Electrostatic Field of a Wire Grid with Square Meshes, B. Ia. Moizhes - 127.

Errata

Errata to Issue No. 2, 1048.

Explosives and Explosions

Investigation of the Pressure in the Detonation of a Fuel-Oxygen Mixture by the Recoiling-Rod Method, S. M. Kogarko - 761.

Ferroelectricity

Concerning the Theory of the Ferroelectric Properties of Polarized Barium Titanate Ceramics, L. P. Kholodenko and M. Ia. Shirobokov - 851.
On Stability of States in Ferroelectric Crystals, V. Kh. Kozlovskii - 1290.
The Problem of the Nature of the High Permittivity Observed in Certain Solid Solutions which Exhibit Ferroelectric Properties, V. A. Bokov - 1657.
Thermionic Emission from Ferroelectrics, N. D. Morgulis - 391.

Ferromagnetic Materials and Ferrites

A Calculation of the Magnetic Moment Induced in a Ferromagnetic Ellipsoid of Revolution in an Alternating Magnetic Field, L. A. Gel'bukh - 489.
Experimental Investigation of the Magnetic Field Produced by Artificial Surface Defects on a Ferromagnetic Body, N. N. Zatsepin - 332.
Electrical Properties of Certain Single Crystals and Polycrystalline Ferrites, V. A. Ioffe, G. I. Khvostenko and Z. N. Zonn - 1840.
Some Investigations on Li-Zn Ferrites, Kh. S. Valeev, N. G. Drozdov and A. L. Prumkin - 2341.
X-Ray Investigation of Solutions of Calcium Aluminoferrites, A. I. Bolkova and E. A. Porai-Koshits - 1023.

Fluid Dynamics

Effect of the Reservoir on the Flow of a Stream of Water at Supersonic Speed, L. F. Vereshchagin, A. A. Semerchan, F. M. Piller and V. A. Galaktionov - 2451.
On the Problem of Friction of a Stream of Water Against the Walls of a Nozzle at Ultrasonic Speeds, L. F. Vereshchagin, A. A. Semerchan, M. V. Maslennikov and S. S. Sekoian - 1472.
On the Wettability of Surfaces in Connection with the Solution of Hydrodynamical Problems, O. A. Gerashchenko and M. M. Nazarchuk - 2596.
Paths of Hot Jets in the Layer of the Atmosphere Just Above the Ground, V. F. Dunskii - 962.

Fluid Flow, Low Speed

Calculation of Laminar Flow of Drop-Forming Liquids Through Tubes, with Inclusion of Non-Isothermal Effects, E. A. Sidorov - 292.
The Efflux from a Canal into Stationary and Moving Media, G. S. Shandorov - 136.

Fracture

On the Nature of Initial Rupture, N. D. Sobolev - 2112.

Friction and Wear

Comparison of the Abrasive Properties of Grains of Minerals by the Method of Mutual Grinding, V. N. Kashcheev - 1001.
On the Relation of Surface Friction and Heat Transfer, E. A. Sidorov - 499.
The Effect of Certain Physical and Mechanical Properties on the Grinding of Brittle Materials, F. K. Aleinikov - 2529.
The Influence of Abrasive Powder Microhardness on the Values of Coefficients of Volume Removal, Determined by the Lapping Method, F. K. Aleinikov - 505.

Glass

Atom Chains and Fine Structure of Glass, V. V. Tarasov - 1407.
Investigation of the Wettability of Certain Materials by Molten Glass, M. G. Cherniak and G. G. Naidus - 2108.
Nature of the Dielectric Loss in Soda – Alumina Silica Glasses, V. A. Ioffe - 1344.
Neutralization Reduction of Electrical Conductivity in Silica Glasses, O. V. Mazurin and E. S. Borisovskii - 243.

On the Dependence of the Electric Conductivity of Glass on the Electric Field Intensity, V. A. Presnov and V. I. Gaman - 857.
Preparation and Study of Dielectric Properties of a Group of Glasses with Increased Permittivity, G. I. Skanavi and A. M. Kashtanova - 1645.
Silicate Glasses Showing Electron Conductivity, O. V. Mazurin, G. A. Pavlova, E. Ia. Lev and E. K. Leko - 2511.
The Relaxation of Stresses in Tempered Glass, G. M. Bartenev and S. G. Liozninskaia - 2539.
The Structure of Glasses and Ultrasonic Propagation Velocities, A. V. Gladkov - 612.

Liquids

Catching on a Plate Coated with a Layer of Soot as a Method for Determining the Drop-Size of an Atomized Fuel, G. D. Salamandra and L. M. Naboko - 546.
Influence of Side Chains in Aromatic Compounds on the Behavior of Mineral Oils in an Electric Field, V. T. Renne and Tsyui Si-Sin - 1351.
Speed Microphotography of Drops of an Atomized Liquid in Flight, G. D. Salamandra and L. M. Naboko - 551.
Theory of Burning of a Liquid Fuel Drop, F. A. Agafonova, M. A. Gurevich and I. I. Paleev - 1689.

Magnetic Resonance

A Paramagnetic Resonance Microwave Spectrometer for the Study of Chemical Reactions, S. E. Bresler, E. M. Saminskii and E. N. Kazbekov - 2357.
Dependence of the First Signal Harmonic for Nuclear Magnetic Resonance Absorption on the Detuning Magnitude, L. S. Shpigel', M. D. Raizer and E. A. Miae - 314.
Dynamic Distortions of Nuclear Magnetic Resonance Signals and Allowances for Such Distortion in Magnetic Measurements, S. S. Kurochkin - 676.

Magnetism

A New Method for Measuring the Intensity of a Magnetic Field, G. E. Pikus and O. V. Sorokin - 2457.
Calculation of the Voltage in the Kikoin-Noskov Photomagnetic Effect and the Dember Effect in Strong Magnetic Fields, B. Ia. Moizhes - 444.
On a Possible Method for Obtaining a Homogeneous Magnetic Field, L. A. Tseitlin - 2592.
On Making Coercive Force Concepts More Precise, A. I. Parfent'ev and V. K. Kushnarev - 2222.
On the Magnetization of Bodies in the Presence of Magnetic Viscosity, M. I. Rozovskii - 318.
Rotation of the Vibration Plane of Millimeter Waves in a Magnetic Field (Faraday Effect), D. I. Mash - 324.
The Nernst-Ettingshausen Effect in Strong Magnetic Fields, L. M. Tsidil'kovskii - 9.

Mass Spectrometry

Mass Spectrometers with a Resolving Power of Several Thousand, B. A. Mamyrin and B. N. Shustrov - 1246.
Radiofrequency Mass-Spectrometer, E. F. Doil'nitsyn, A. L. Trubetskoi and M. Ia. Shcherbakova - 364.
Resolving Power Calculation and Cycle Choice for a Three-Cell Radiofrequency Mass-Spectrometer, M. Ia. Shcherbakova - 534.

Metallurgy

Absorption and Diffusive Scattering of Ultrasonic Waves in Metals, L. G. Merkulov - 953.
Characteristics of the Temperature — Resistivity Relationship for Liquid Eutectic Systems, F. Gaibullaev and A. R. Regel' - 1850.
Comparison of the Abrasive Properties of Grains of Minerals by the Method of Mutual Grinding, V. N. Kashcheev - 1001.
Electrical Properties of Some Complex Tungsten Oxides, Z. I. Ornatskaia - 111.
Electrical Properties of the Intermetallic Compound CdSb, L. M. Pilat - 100.
Influence of Extinction on the Intensity of X-Ray Interferences in the Investigation of Steel, E. L. Gal'perin and Iu. S. Terminasov - 1276.
Investigation of the Wettability of Certain Materials by Molten Glass, M. G. Cheniak and G. G. Naidus - 2108.
Laws Governing Lubrication when Metals are Worked Under Pressure, S. Ia. Veiler and V. I. Likhtman - 989.
On Intermetallic Alloys of Platinum and Gold With Alkali and Alkaline Earth Metals, I. L. Sokol'skaia - 108.
On the Calculation of the Simplest Equilibrium Diagrams of Ternary Alloys. II. Some Solutions of the General Equations for the Case of Separation of Solutions Accompanied by Phase Transition, B. Ia. Pines - 1756.
On the Electrical Properties of the System: Lead-Antimony, I. D. Konozenko and V. I. Ust'ianov - 1567.
Physical Properties of Alloys and Molecular Concentration, P. A. Savintsev - 1149.
Relaxation of Nonoriented Microstresses II. B. M. Rovinskii and V. G. Liutsau - 2005.

Sintering of Multi-Phase Bodies. III. Sintering of Mixtures Containing Low-Melting-Point Powders, B. Ia. Pines, A. F. Sirenko and N. I. Sukhinin - 1763.
Some Characteristics of Temperature Dependence of Electrical Conductivity of Single Phase Solutions of Ag-Au, In-Pb and Bi-Sb Systems in the Solid and Liquid States, F. Gaibullaev and A. R. Regel' - 2082.
Some Correlations Regarding the Mechanical Strength of Materials Obtained by Sintering of Powdered Metals. III. Case When Powder Mixtures Contain Easily Fusible Components, B. Ia. Pines, A. F. Sirenko and N. I. Sukhinin - 1773.
Testing the Scratch Resistance of Metals, M. M. Tenenbaum - 1006.
The Effects of Screening a Coulomb Field by Free Charges in Metals and Semiconductors, I. Z. Fisher - 570.
The Electrical Conductivity of Alloys Forming a Mechanical Mixture, A. E. Nikerov - 1892.
The Electrical Properties of Bismuth Alloys. III. Ternary Alloys, "Reversion" to the Properties of Bismuth, L. I. Mokievskii and G. A. Ivanov - 1576.
The Mechanism of Formation of Intercrystalline Cracks in the Heat-Affected Zone in Fusion Welding, B. I. Medovar - 1454.
The Plasticity of Brass at Superhigh Pressures, Iu. N. Riabinin, L. D. Livshits and L. F. Vereshchagen - 2156.
The Use of Ultrasonic Waves in Investigating the Structure of Steels, L. G. Merkulov - 1282.
The Work Function of Activated Alloys of CuAlMg and CuAlBe, V. N. Lepeshinskaia and V. A. Lebedeva - 1131.
Thermal and Thermoelectric Properties of Alloys of Silicon with Transition Metals, P. V. Gel'd - 95.
X-Ray Study of Lattice Strains in Aluminum Deformed at Liquid-Nitrogen Temperature, S. O. Tsobkallo and B. I. Smirnov - 1780.

Nuclear Physics and Instrumentation

A Cascaded Synchrocyclotron, A. L. Mints and M. K. Kaminskii - 1237.
A Fast-Acting Wilson Chamber Synchronized with a Synchrotron, I. P. Ivor and A. P. Komar - 794.
A Pulse Ionization Chamber as an Instrument for the Simultaneous Study of the Energy and Angular Distributions of Charged Particles, B. A. Bochagov, A. A. Vorob'ev and A. P. Komar - 1458.
A Study of the Process of Capture of Electrons in the Betatron, Iu. S. Korobochko - 1486.
Effect of the Quantum Nature of the Radiation on Radial Phase Oscillations in Cycle High-Energy Electron Accelerators, A. N. Didenko - 1509.
Hard Focusing in Linear Electron Accelerators, K. N. Stepanov and A. A. Shanhanov - 1734.
Laws Governing the Magnetic Field of a Betatron, B. N. Rodimov - 1229.
On the Mechanism of Electron Capture in Betatrons, Iu. S. Korobochko - 673.
Resonant Perturbations of Synchrotronic Oscillations in Charged- Particle Accelerators, L. S. Danilkin and M. S. Rabinovich - 1442.
The Dependence of Betatron Bremsstrahlung on the Injection Parameters, V. N. Logunov, E. P. Ovchinnikov and V. D. Rusanov - 1032.
The Diffusion Theory of a Magnetron (Static Regime), L. E. Pargamanik and M. Ia. Mints - 1197.
The Nonstationary Circulating Current Associated with the Injection of Electrons into a Betatron, V. N. Logunov, E. P. Ovchinnikov, V. D. Rusanov and S. S. Semenov - 1038.
The Theory of a Split-Anode Magnetron, M. Ia. Mints - 1210.
The Use of Helium-Filled Proportional Counters at Low Temperatures, A. V. Kogan, N. M. Reinov, L. A. Sokolov and M. F. Stel'makh - 381.
Theory of a Magnetron with a Cylindrical Anode, M. Ia. Mints - 1203.

Nuclear Reactor

Effective Boundary Condition of the Surface of Separation Between Multiplying and Moderating Media, A. N. Akhiezer, N. Akhiezer and G. Liubarskii - 749.

Optical Properties

In Regard to the Criticism by P. P. Kas'iankov of My Method of Obtaining the Principal Electron-Optical Equations for Pencils with Curvilinear Axis, G. A. Grinberg - 2259.
On Certain Comparative Characteristics of the FSK-M and FS-K Photoconductors when Exposed to X-Rays, S. V. Svechnikov - 588.
The Theory of Polarons with Arbitrary Coupling Forces Between the Electrons and Optical Lattice Vibrations, S. I. Pekar and V. L. Bulmistrov - 2478.
The Optical Transmission Spectrum of Barium Titanate, A. F. Iatsenko - 2257.

Phase Transformations

Freezing of Drops of a Supercooled Water Mist in an Acoustic Field, V. V. Bazilevich and N. P. Tverskoi - 1696.

Gas Parameters at the Critical Point with Variation of the Specific Heat Taken Into Account, Iu. P. Lun'kin - 1700.

Realization of a Constant Phase Difference Over a Prescribed Frequency Range, D. N. Vinogradov and R. A. Kazarian - 514.

The Transition of a Single-Phase System Into a Two-Phase System Under the Influence of a Heat Source, V. S. Khomenko - 1418.

Piezoelectricity

On the Doublet Splitting of Resonance Vibrational Frequencies of a Tourmaline Piezoelectric Plate, B. A. Finagin - 2027.

Some Features of the Piezoelectric Effect of Barium Titanate as Measured Statically, E. K. Dobrer and K. N. Karmen - 455.

Plasmas

A Resonance Method for Determining the Electron Concentration and Number of Collisions in a Gas Discharge Plasma, L. L. Vasserman - 461.

Plasma Penetration in a Mercury-Vapor Discharge, M. D. Gabovich and E. T. Kucherenko - 266.

Plastic Deformation

Diffusive Creep of Solids, B. Ia. Pines - 2149.

On the Simplification of the Nonlinear Integral Equations of Slip and Relaxation for a Complex State of Stress, M. L. Rozovskii - 2590.

On the Question of the Effect of Plastic Deformation on the Speed of Diffusion, A. A. Presniakov - 512.

Relaxation of Nonoriented Microstress, II. B. M. Rovinskii and V. G. Liutsau - 2005.

The Plasticity of Brass at Superhigh Pressures, Iu. N. Riabinin, L. D. Livshits and L. F. Vereshchagen - 2156.

Theory of Elastic Fatigue in Wood, B. L. Ogarkov - 1016.

Thermoelastic Phenomena in Rubbers Based on Natural Latex During Cyclic Deformation, M. P. Votinov, L. L. Sul'zhenko and E. V. Kuvshinskii - 2143.

Thermoelastic Phenomena in SKS-30A and SKB Rubbers in Adiabatic Deformation up to the Breaking Point, M. P. Votinov and E. V. Kuvshinskii - 2139.

Polymers

Application of the New Theories of Polarization to the Calculation of Effective Dipole Moments of Polar Systems, L. L. Burshtein and G. P. Mikhailov - 617.

Determination of Polymer Transition Temperature by a Polarized Infrared Spectra Method, V. N. Nikitin and B. Z. Volchek - 1499.

Internal Rotations in Polymer Chains and Their Physical Properties, V. Mean Anisotropy of Linear Polymer Molecules with a Symmetric Potential of Retarded Internal Rotation, Iu. Ia. Gotlib - 637.

Internal Rotation in Polymer Chains and Their Physical Properties, VI. Dimensions and Dipole Moments of Polyvinyl Chains with Massive Substituents, O. B. Pritsyn and Iu. A. Sharonov - 2544.

Internal Rotation in Polymer Chains and Their Physical Properties, VII. The Configuration of Polymer Chains in Crystalline Form and in Solution, O. B. Pritsyn and Iu. A. Sharonov - 2561.

Investigation of Molecular Interaction in Polymers by the Method of Effective Dipole Moments, L. L. Burshtein and G. P. Mikhailov - 624.

On Certain Peculiarities of the Dielectric Losses of Polycaprolactam, G. P. Mikhailov, B. L. Sazhin and N. N. Kuprilanchik - 868.

On the Dielectric and Mechanical Losses of Low Pressure Polyethylene, G. P. Mikhailov, S. P. Kabin and T. A. Krylova - 1899.

Stability of Certain Organic Materials to Discharges, M. M. Mikhailov and Lyu Tsy-yui - 861.

Study of Polyamides in Polarized Infrared Light, B. Z. Volchek and V. N. Nikitin - 1705.

Radiation Effects in Solids

On the Calculation of Multiple Scattering in Cylindrical Sources, E. E. Kovalev and V. L. Popov - 1506.

Radioactivity

Measurement of Extremely Small α-Emitter Concentrations in Vegetable Objects Using Thick Photographic Emulsions, B. P. Soltitskii and A. L. Kartuzhanskii - 540.

Rheology

Microscopic Investigation of Crack Propagation on Rupture, S. N. Zhurkov and E. E. Tomashevskii - 1140.

The Mechanism of Formation of Intercrystalline Cracks in the Heat-Affected Zone in Fusion Welding, B. L. Medovar - 1454.

The Relaxation of Stresses in Tempered Glass, G. M. Bartenev and S. G. Lioznianskaia - 2539.

Semiconductor Devices

A Balanced Modulator Using the Hall Effect in Semiconductors, L. S. Berman, S. S. Raikhman and Z. A. Khalfin - 1480.

A Semiconducting Sensitive Element for the Detection of Gamma Radiation, A. M. Ryvkin, A. P. Bogomazov, B. M. Konovalenko and O. A. Matveev - 1484.

A Semiconductor Thermostat for Self-Excited Oscillators, E. K. Iordanishvili and L. G. Tkalich - 1109.

A Study of the Characteristics of Plane-Parallel Germanium Diodes, V. E. Kosenko - 406.

A Tube Photoelectric Element of Cadmium Telluride (Preliminary Communication), G. A. Lomakina, Iu. A. Vodakov, G. P. Naumov and Iu. P. Maslakovets - 1477.

Amplification of Minority Carrier Current in Nonideal p-n Junctions, V. I. Stafeev - 2037.

Characteristics and Operative Mechanism of Germanium n-p Alpha Counters, A. V. Airapetiants and S. M. Ryvkin - 79.

Design of Flat Anode for a Porous Tantalum Electrolytic Capacitor, L. N. Zakgeim - 1667.

Effect of Strong Electrical Field on Transparancy of Germanium Diode, Iu. I. Ukhanov and S. G. Shul'man - 2332.

Emission by a Spherical Contact in a Drawing Electric Field, Z. S. Gribnikov and K. B. Tolpygo - 2074.

Galvanomagnetic Oscillators, V. N. Bogomolov - 594.

Installation for Measuring the Hall Effect in Semiconductors, V. N. Bogomolov and V. A. Miasnikov - 1103.

Low-Inertia Germanium Bolometers, B. N. Bogomolov, Iu. V. Ilisavskii, M. Kornfel'd, L. S. Sochava and R. I. Strunin - 188.

On the "Commutation" of Semiconducting Thermoelements, L. S. Stil'bans - 186.

On the Kinetics of Photodiodes, S. M. Ryvkin - 1558.

On the Use of Germanium n-p α-Ray Counters at Low Temperatures, S. V. Airapetiants, A. V. Kogan, N. M. Reinov, S. M. Ryvkin and I. A. Sokolov - 1482.

Oscillographic Study of the Magnetic Field of a Direct Current Electric Motor by Means of the Hall Effect in Films, O. D. Elpat'evskaia and V. A. Perchuk - 1478.

Point-Contact Triodes of Germanium with Small Lifetime of the Injected Current Carriers, A. N. Kvasnitskaia, E. B. Mertens, E. G. Miseliuk and A. I. Skopenko - 393.

Surface Discharges in Electron-Hole Junctions, B. M. Vul and A. P. Shotov - 185.

The Frequency Response of Germanium Diode Modulators to Infrared Radiation, Iu. I. Ukhanov - 1810.

The Influence of Emitter Efficiency on the Transient Characteristics of Semiconductor Triodes, E. I. Adirovich and V. G. Koltilova - 424.

The Influence of Surface Recombination on the Efficiency of a Photocell with a p-n Transition Region, G. L. Bir and G. E. Pikus - 419.

The Injection Coefficient and Direct Volt-Ampere Characteristic of a Spherical Contact, Z. S. Grubnikov and K. B. Tolpygo - 555.

The Mechanism by which Base Illumination with Visible Light Influences the Pulse Size from Cadmium Sulfide Alpha Counters, A. V. Airapetiants and S. M. Ryvkin - 89.

The Passage of Single and Periodic Current Impulses Through a Semiconductive Triode, V. G. Kolotilova - 561.

The Problem Involved in Determining the Causes which Give Rise to the Spread in the Values of Transistor Parameters, I. Transistors of the p-n-p Type, A. P. Viatkin - 1092.

The Problem Involved in Determining the Causes Which Give Rise to the Spread in the Values of Transistor Parameters, II. Transistors of the n-p-n Type, A. P. Viatkin and V. A. Elchin - 1099.

The Representation of a Semiconducting Diode as a Series Combination of Two Nonlinear Delay Links, and the Applicability of Pulse Voltage Division Method, Iu. K. Barsukov - 2103.

The Structure of the Upper Layer at the Electrode in a Selenium Rectifier, V. A. Dorin and D. N. Nasledov - 74.

The Transient, Frequency and Phase Responses of a Common-Emitter Transistor, E. I. Adirovich and V. K. Temko - 1068.

Transient Blocking in Flat Germanium DG-Ts Junction Diodes, Iu. K. Barsukov - 2094.

Utilization of the Hall Effect in Semiconductors for the Purpose of Measuring Electric Power, L. S. Berman - 1088.

Variation of the Emissivity of a p-n Junction with its Structure and Operating Conditions, K. B. Tolpygo - 809.

Volt-Ampere Characteristics of Semiconductor Power Rectifiers, E. I. Rashba and A. I. Nosar' - 1322.

Semiconductors

A Method for Measuring the Rate of Surface Recombination in Accordance with the Variation of the Resistance of a Semiconductor in a Magnetic Field, V. P. Zhuze, G. E. Pikus and O. V. Sorokin - 1061.

A Method for Measuring the Volume Lifetime and the Diffusion-Coefficient of Current Carriers by Measuring the Resistance of a Semiconductor in a Magnetic Field, O. V. Sorokin - 2572.

A Study of the Thermal Conductivity of Lead Telluride, E. D. Deviatkova - 414.

A Study of the Thermoelectric Properties of Lead Telluride, E. Z. Gershtein, T. S. Stavitskaia and L. S. Stil'bans - 2302.

All-Union Conference on Theory of Semiconductors, M. F. Deigen, I. M. Dykman and K. B. Tolpygo - 1513.

An Experimental Study of the Relation Between the Peltier Effect and Thermoelectromotive Foces in Germanium, M. Shtenbek and P. I. Baranskii - 205.

An Investigation of the Dielectric Permittivity of Semiconductors, Z. I. Kir'iashkina, F. M. Popov, D. N. Bilenko and V. I. Kir'iashkin - 69.

An Investigation of the Thermoelectric Properties of Lead Selenide and Lead Telluride, N. V. Kolomoets, T. S. Stavitskaia and L. S. Stil'bans - 59.

Appearance of Electromotive Forces in Amorphous Selenium Under the Action of X-Rays, F. I. Kolomoitsev and F. F. Kodzhespirov - 823.

Auto-Electronic Emission from Cadmium Sulfide and Cadmium Selenide, A. I. Klimin - 649.

Calculation of Oscillator Strengths for Transitions of an Impurity Electron in a Uniaxial Crystal, A. I. Ansel'm and L. I. Korovin - 1467.

Calculation of the Voltage in the Kikoin-Noskov Photomagnetic Effect and the Dember Effect in Strong Magnetic Fields, B. Ia. Moizhes - 444.

Certain Photoelectric Properties of CdSe and CdTe Monocrystals, S. V. Svechnikov and V. T. Aleksandrov - 842.

Certain Problems in the Future Development of Semiconductor Science, A. F. Ioffe - 1049.

Change of Lifetime in Thin German Plates When in an External Electric Field and with Adsorption, V. I. Liashenko - 1496.

Change of Properties of Semiconductors During Melting, A. I. Gubanov - 2335.

Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation, I. Static Characteristics, S. V. Svechnikov - 2320.

Characteristics of the Additional Conductivity Induced in Single-Crystal Cadmium Selenide by X-Irradiation, II. Kinetic Aspects, S. V. Svechnikov - 2328.

Crystallography of Germanium, G. Novak - 1544.

Decay of an Exciton by Interaction with a Phonon in an Atomic Semiconductors, A. A. Lipnik - 2575.

Dependence of the Foreign (Injected) Current-Carrier Lifetime on the Concentration of Antimony Impurity in Germanium, V. E. Lashkarev, V. G. Litovchenko, N. M. Omel'ianovskaia, R. N. Bondarenko and V. I. Strikha - 2271.

Diffusion and Solubility of Iron in Germanium, A. A. Bugai, V. E. Kosenko and E. G. Misliuk - 183.

Distribution of the Concentration of Injected Carriers for Moving Region of Injection and Under the Action of a Field. (On a "Null" Method for Measuring Mobility), S. M. Ryvkin and Iu. A. Makhalov - 397.

Distribution of Nonequilibrium Charge Carriers in the Base Region of a p-n Junction with a High Injection Coefficient, M. I. Iglitsyn, Iu. A. Kontsevoi and A. I. Sidorov - 2289.

Edge Breakdown of p-n Junctions in Germanium, B. M. Vul and A. P. Shotov - 2031.

Effect of Annealing on Local Levels and the Nonequilibrium Current-Carrier Lifetime in Germanium with Iron Impurity, K. D. Glinchuk, E. G. Miseliuk and N. N. Fortunatova - 2476.

Effect of Bromine Impurity on the Thermal Conductivity of Selenium, G. B. Abdullaev and A. A. Bashmaliev - 1827.

Effect of Group III and V. Elements on the Electron-Hole Recombination Rate in Germanium, V. G. Alekseeva, S. G. Kalashnikov, L. P. Kalnach, I. V. Karpov and A. I. Morozov - 1794.

Electrical Properties of Some Compound Oxide Semiconductors, B. T. Kolomiets, I. T. Sheftel' and E. V. Kurlina - 40.

Electrical Properties of Zinc-Doped Germanium, S. G. Kalashnikov, E. Iu. L'vova and V. V. Ostroborodova - 1789.

Galvanomagnetic Properties of Tellurium at Low Temperatures, I. S. S. Shalyt - 166.

Indium Purification and Production of an InSb Compound with High Electron Mobility, V. M. Sergeeva and E. L. Shtrum - 2507.

Interaction Between Electrons in Narrow Impurity Bands in Semiconductors, A. G. Samoilovich, M. I. Klinger and V. M. Nitsovich - 2583.

Interaction of an Impurity Center Electron with the Acoustic Vibrations of a Uniaxial Crystal, L. I. Korovin - 828.

Investigation of Recombination of Current Carriers in Germanium with Iron Impurity, K. D. Glinchuk, E. G. Miseliuk and N. N. Fortunatova - 2283.

Investigation of the Field Effect and of Surface Recombination in Samples of Germanium, A. V. Rzhanov, Iu. F. Novotorskii-Vlasov and I. G. Neizvestnyi - 2274.

Investigation of the Influence of the Recombination Processes Galvanomagnetic Effects, S. A. Poltinnikov and L. S. Stil'bans - 23.

Investigation of the Temperature Dependence of the Work Function of Several Semimetals, G. N. Lekhtinen, M. A. Rzaev and L. S. Stil'bans - 1114.

Lifetime of Nonequilibrium Charge Carriers in Germanium at Arbitrary Levels of Injection, M. I. Iglitsyn, Iu. A. Kontsevoi and A. I. Sidorov - 2292.

Magneto-Resistive Phenomena in n-Ge or n-Si with Strong Magnetic Fields, M. I. Klinger and P. I. Voroniuk - 1491.

Magnetic Susceptibility of Mott Excitons in Semiconductors, L. L. Korenblit - 434.

Magnetic Susceptibility in Tellurium Type Semiconductors, Iu. A. Firsov - 2053.

Measurement of Short Lifetimes of Charge Carriers in Germanium, L. S. Smirnov - 2299.

Measurement of the Bulk Thermal EMF in Germanium, P. I. Baranskii and V. E. Lashkarev - 1055.

Measuring the Lifetime of Charge Carriers in Semiconductors, M. I. Iglitsyn, Iu. A. Kontsevoi, V. D. Kudin and A. A. Meier - 1306.

Modulation of Infrared Radiation in Germanium at Low Temperatures, Iu. I. Ukhanov - 1536.

Nonlinear Semiconductors Based Upon ZnO-TiO_2, Kh. S. Valeev and M. D. Mashkovich - 1533.

On Determining the Relaxation Times of Surface States in Germanium, A. E. Iunovich - 1587.

On Electrostatic Electron Emission of Semiconductors, I. L. Gofman, B. G. Smirnov, G. S. Spirin and G. N. Shuppe - 2471.

On Recombination Centers in Germanium After "Low-Temperature" Heat Treatment, T. V. Mashovets and S. M. Ryvkin - 210.

On Simple Methods for Investigating the Band Structure of Certain Semiconductor Compounds, V. E. Khartsiev - 1593.

On the Diffusion of Indium, Antimony and Tellurium in Indium Antimonide, B. I. Boltaks and G. S. Kulikov - 67.

On the Mobility of Electrons and Holes in Solid Solutions Based on Lead and Bismuth Tellurides, S. V. Airapetiants, B. A. Efimova, T. S. Stavitskaia, L. S. Stil'bans and L. M. Sysoeva - 2009.

On the Probability of Recombination Capture of Charge Carriers by Frenkel Defects in n-Type Germanium, L. S. Smirnov and V. S. Vavilov - 387.

On the Question of Low-Temperature Anomalies in Impurity Semiconductors, I, M. I. Klinger - 1782.

On the Question of Low-Temperature Anomalies in Impurity Semiconductors, II, M. I. Klinger - 1786.

On the Question of the Effect of an External Electrostatic Field on the Surface Recombination Rate in Germanium, V. P. Zhuze, G. E. Pikus and O. V. Sorokin - 17.

On the Scattering of Current Carriers in Semiconductors with Ionic Binding, T. A. Konotorova - 237.

On the Theory of the Transverse Photomagnetic Effect, B. Ia. Moizhes and Iu. N. Obraztsov - 1336.

On the Width of the Forbidden Band in InSb, V. V. Galavanov - 583.

Production of High-Purity Indium Antimonide by Zone Fusion, K. I. Vinogradov, V. V. Galavanov and D. N. Nasledov - 1832.

Production of Oriented Germanium Crystals by the Contact Method, E. Rubes - 1538.

Quantum Theory of Kinetic Phenomena in Semiconductors, A. G. Samoilovich and L. L. Korenblit - 2483.

Scattering of Holes in Germanium and Silicon, G. E. Pikus - 1488.

Self-Diffusion in Selenium, B. I. Boltaks and B. T. Plachevnov - 2071.

Study of Microhardness of Certain Semiconductors with the Zinc Blend Structure, A. S. Borshchevskii, N. A. Goriunova and N. K. Takhtareva - 1301.

Study of Thermomagnetic Effects in Germanium with Holes, L. V. Mochan, Iu. N. Obraztsov and T. V. Krylova - 213.

The Effect of Heating Germanium by an Electric Current on the Concentration of Thermal Acceptors, V. G. Alekseeva, B. N. Zobnina and I. V. Karpova - 190.

The Effects of Screening a Coulomb Field by Free Charges in Metals and Semiconductors, I. Z. Fisher - 570.

The Electrical State and Diffusion of Thermal Acceptors in Germanium, V. A. Zhidkov and V. E. Lashkarev - 803.
The Energy Spectrum of Current Carriers in Semiconductors of the Germanium Tupe, A. G. Samoilovich and K. D. Tovstiuk - 1629.
The Hydrogenlike System with Partially Screened Coulomb Potential, I. Z. Fisher and V. I. Krylovich - 1184.
The Motion of Minority Carriers in Germanium, M. Shtenbek and P. L. Baranskii - 195.
The Nernst-Ettingshausen Effect in Mercury Telluride, I. M. Tsidil'kovskii - 1622.
The Nernst-Ettingshausen Effect in Strong Magnetic Fields, I. M. Tsidil'kovskii - 9.
The Temperature Dependence of the Hall Coefficient in Semiconductors with Constant Carrier Concentrations, E. I. Kaplunova and K. B. Tolpygo - 2087.
The Theory of Semiconductors with an Excited Impurity Band, M. I. Klinger and Iu. I. Zozulia - 2123.
The Thermal Conductivity of Germanium, E. D. Deviatkova and I. A. Smirnov - 1805.
Theory of Transport Phenomena, M. I. Klinger - 2578.
Thermal Conversion of Germanium when it is Irradiated by an Electron Beam, L. A. Balabanova and M. M. Bredov - 1295.
Thermal Emf Close to the Fusion Point, M. S. Ablova and A. P. Regel' - 2021.
Vitreous Semiconductors, Some Properties of Materials in the As_2Se_3–As_2Te_3 System, II, T. N. Vengel' and B. T. Kolomiets - 2314.

Shock Waves

Gas Parameters at the Critical Point with Variation of the Specific Heat Taken into Account, Iu. P. Lun'kin - 1700.
The Structure of Shock Waves, Iu. P. Lun'kin - 1169.

Sound Waves

Absorption and Diffusive Scattering of Ultrasonic Waves in Metals, L. G. Merkulov - 953.
Axially-Symmetrical Acoustic Streaming at the Walls of a Cylinder, P. N. Kubanskii - 1165.
Behavior of a Resonant System in a Current, P. N. Kubanskii - 158.
The Method of Approximate Separation of Variables and Its Application to Boundary Value Problems of Electrodynamics and Acoustics, L. A. Vainshtein - 1955.
The Structure of Glasses and Ultrasonic Propagation Velocities, A. V. Gladkov - 612.
The Use of Ultrasonic Waves in Investigating the Structure of Steels, L. G. Merkulov - 1282.

Space Charge

Condition for the Preservation of the Geometrical Pattern of the Electrostatic Field on the Appearance of a Space Charge, L. E. Tsyrlin - 1470.
Simple Design for a Rubber-Sheet Apparatus for Determining the Trajectories of Charged Particles in the Presence of Space Charge, V. M. Kel'man, K. G. Utkin and L. N. Loginova - 1938.
Space Charge Compensation in an Electron Beam, V. I. Volosok and B. V. Chirikov - 2437.

Spectra and Spectroscopy; Gas Analysis

A Paramagnetic Resonance Microwave Spectrometer for the Study of Chemical Reactions, S. E. Bresler, E. M. Saminskii and E. N. Kazbekov - 2357.
Absorption Edge Spectra in Cadmium Sulfide Crystals and Their Relation to Crystal Surface and Deformation, E. F. Gross and B. S. Razbirin - 2014.
Absorption Spectrum of KH_2PO_4 in the Region of Hydroxyl Valance Vibration, A. N. Lazarev - 385.
Determination of Polymer Transition Temperature by a Polarized Infrared Spectra Method, V. N. Nikitin and B. Z. Volchek - 1499.
Diamagnetic Exciton Levels and Cyclotron Resonance, E. F. Gross, B. P. Zakharchenia and P. P. Payinskii - 2018.
Line-Like Spectrum at the End of the Fundamental Absorption, and the Structure of Cadmium Sulfide Crystals, E. F. Gross, B. S. Razbirin and M. A. Iakobson - 181.
Line Spectrum of the Main Absorption Edge of Crystals of Cadmium Sulfide, E. F. Gross, B. S. Razbirin and M. A. Iakobson - 1043.
On the Possibility of Measuring Refractive Indices of Crystalline Substances with an Abbe Refractometer, F. Nechai - 2025.
On the Spectral Characteristic of the External Photoelectric Effect From an Activated Copper-Magnesium Alloy, V. N. Lepeshinskaia and G. A. Iudaev - 450.
Temperature Dependence of Spectral Absorption in Silver Bromide Crystals, S. G. Grenishin and A. A. Solodovnikov - 231.

Surface Properties

A Method for Measuring the Rate of Surface Recombination in Accordance with the Variation of the Resistance of a Semiconductor in a Magnetic Field, V. P. Zhuze, G. E. Pikus and O. V. Sorokin - 1061.
Approximate Solution of Equations for the Thermal Boundary Layer with Variations in Boundary Layer Structure, G. S. Ambrok - 1979.

Investigation of the Field Effect and of Surface Recombination in Samples of Germanium, A. V. Rzhanov, Iu. F. Novotoskii-Vlasov and I. G. Neizvestnyi - 2274.
Laws Governing Lubrication when Metals are Worked Under Pressure, S. Ia. Veller and V. L. Likhtman - 989.
On Determining the Relaxation Times of Surface States in Germanium, A. E. Iunovich - 1587.
On the Question of the Effect of an External Electrostatic Field on the Surface Recombination Rate in Germanium, V. P. Zhuze, G. E. Pikus and O. V. Sorokin - 17.
Surface Discharges in Electron-Hole Junctions, B. M. Vul and A. P. Shotov - 185.
Surface Ionization of Potassium Atoms and KCl and CsCl Molecules on Tungsten Filaments in Electric Fields up to 2 Mv/cm, E. Ia. Zandberg - 2399.
The Influence of Surface Recombination of the Efficiency of a Photocell with a p-n Transition Region, G. L. Bir and G. E. Pikus - 419.
Theory of a Cylinder Rolling on a Surface Covered with a Layer of Plastic Lubricant, L. I. Kotova and B. V. Deriagin - 1154.
Theory of the Rolling of a Cylinder on a Surface Covered with a Layer of a Viscous-Plastic Lubricant, L. I. Kotova - 1424.

Thermal Conductivity and Thermal Conduction; Heat Transfer

A Method for the Experimental Study of the Process of Heating a Solid Body, N. V. Shumakov - 771.
A Study of the Thermal Conductivity of Lead Telluride, E. D. Deviatkova - 414.
An Investigation of the Steady-State Heat Flow Through a Current-Carrying Conductor, A. L. Burshtein - 1397.
Calculation of Heat Exchange by Radiation in Cooled Combustion Chambers, P. K. Konakov, S. S. Filimonov, and B. A. Khrustalev - 971.
Certain New Methods of Approximate Calculation of Radiative Heat Transfer, A. L. Lubny-Gertsyk - 1255.
Concerning P. V. Dvorichenko's Article, "Certain Concepts Concerning the Procedure for Calculation of Heat Exchange and Hydrodynamic Resistance of High-Speed Gas Flow" A. A. Gukhman - 801.
Effect of Bromine Impurity on the Thermal Conductivity of Selenium, G. B. Abdullaev and A. A. Bashmaliev - 1827.
Extension of Odelevskii's Theory of Generalized Conductivity to Thermal Conductivity, Sh. N. Pliat - 2588.
Heat Exchange with Steam Condensation on Vertical Tubes, Iu. G. Burov - 297.
Heat Transfer to Water and Steam at Variable Specific Heat (in Near-Critical Region), Z. L. Miropol'skii and M. F. Shitsman - 2196.
Methods for Calculation of Thermal Conduction Coefficients of Capillary-Porous Materials, A. A. Babanov - 476.
Nonstationary Thermal Conductivity in Laminar Bodies, M. G. Kogan - 467.
On the Problem of Nonstationary Heat Transfer Through a Plate, V. P. Glikman - 2593.
On the Relation of Surface Friction and Heat Transfer, E. A. Sidorov - 499.
On the Temperature of a Flat Plate Across Which Flows a Reacting Gas Mixture, E. P. Vaulin - 1390.
The Determination of Heat Transfer Surface for the Case of Zero Temperature Difference Between Cooled and Coolant Fluids at the End Point of Flow, L. I. Gel'perin and K. S. Minsker - 1987.
The Effect of Heat Waves on the Stressed State of a Rectangular Slab, N. Ia. Ranarin - 1019.
The Effect of Heating Germanium by an Electric Current on the Concentration of Thermal Acceptors, V. G. Alekseeva, B. N. Zobnina and I. V. Karpova - 190.
The Effect of Surface Temperature Variability on Heat Exchange in Laminar Flow in a Boundary Layer, G. S. Ambrok - 738.
The Electrical and Thermal Conductivies, Thermoelectric Power, Hall and Nernst Constants of Amorphous Substances with Electron Conductivity, A. I. Gubanov - 1.
The Method of Average Temperature for the Study of the Process of Heating a Solid Body, E. V. Kudriavtsev and N. V. Shumakov - 782.
The Thermal Conductivity of Germanium, E. D. Deviatkova and I. A. Smirnov - 1805.
Thermal and Thermoelectric Properties of Alloys of Silicon with Transition Metals, P. V. Gel'd - 95.
Thermal Electromotive Force and Additional Thermal Conductivity of Statistical Mixtures, C. V. Airapetiants - 429.

Thermodynamics Properties and Thermodynamics

Free Heat Convection of Mercury in Closed Circular Tubes, A. G. Smirnov - 2209.
Gas Parameters at the Critical Point with Variation of the Specific Heat Taken into Account, Iu. P. Lun'kin - 1700.

Laws Governing the Conversion of Work into Heat in the Adiabatic Deformation of Butyl Rubber Vulcanizates, M. P. Votinov and E. V. Kuvshinskii - 2375.

On Linear Heat Problems with One Moving Boundary, D. V. Redozubov - 1993.

The Temperature Field of Tubes in a Solid Body, L. M. Al'tshuler - 1382.

Thermoelectricity

A Study of the Thermoelectric Properties of Lead Telluride, E. Z. Gershtein, T. S. Stavitskaia and L. S. Stil'bans - 2302.

An Experimental Study of the Relation Between the Peltier Effect and Thermoelectromotive Foces in Germanium, M. Shtenbek and P. I. Baranskii - 205.

An Investigation of the Thermoelectric Properties of Lead Selenide and Lead Telluride, N. V. Kolomoets, T. S. Stavitskaia and L. S. Stil'bans - 59.

The Electrical and Thermal Conductivities, Thermoelectric Power, Hall and Nernst Constants of Amorphous Substances with Electron Conductivity, A. I. Gubanov - 1.

Thermal and Thermoelectric Properties of Alloys of Silicon with Transition Metals, P. V. Gel'd - 95.

Thermal Electromotive Force and Additional Thermal Conductivity of Statistical Mixtures, C. V. Airapetiants - 429.

Thermal Emf Close to the Fusion Point, M. S. Ablova and A. P. Regel - 2021.

Thin Films

On the Physico-Chemical Properties of Magnesium-Bismuth and Magnesium-Antimony Compounds in Thin Layers, G. A. Kurov - 2474.

On the Structure and Properties of Films Produced by Vacuum Evaporation of InSb, P. A. Kurov - 2022.

Passage of Positive Ions of Lithium Through Thin Evaporated Layers of Aluminum, V. V. Beliakova and M. A. Mittsev - 729.

The Production and Investigation of Intermetallic Compounds in Thin Films, V. A. Presnov and V. F. Synorov - 104.

Some Features of the Electrical Properties of HgSe-HgTe Films, O. D. Elpat'evskaia and A. R. Regel' - 35.

Transmission Lines and Wave Guides

Computation of Corona Characteristics for Stranded Electrical Transmission Lines, G. N. Aleksandrov - 711.

Electron Waves in Periodic Structures, L. A. Vainshtein - 2176.

On the Problem of Wave Propagation in a Chain of Cylindrical Resonators, G. N. Rapoport - 1951.

Turbulence

A Method for Computing the Turbulent Boundary Layer when a Longitudinal Pressure Gradient is Present, K. K. Fediaevskii and A. S. Ginevskii - 275.

Concerning a Method for Determining the Turbulent Speed of Propagation of a Flame, K. P. Vlasov - 303.

On the Problem of the Hydraulic Resistance in Turbulent Nonisothermal Flow of Liquids in Tubes, B. S. Petukhov and G. F. Muchnik - 996.

Paths of Hot Jets in the Layer of the Atmosphere Just Above the Ground, V. F. Dunskii - 962.

Vibrations

The Theory of Polarons with Arbitrary Coupling Forces Between the Electrons and Optical Lattice Vibrations, S. I. Pekar and V. M. Buimistrov - 2478.

Viscosity and Viscoelasticity

Mechanism of Boundary Lubrication and the Properties of the Boundary Lubrication Film, B. V. Deriagin, V. V. Karasev, N. N. Zakhavaeva and V. P. Lazarev - 980.

On the Efflux of Liquids of Considerable Viscosity for Variable Level and the Theory of the Engler Viscosimeter, A. D. Al'tshul' - 731.

X-Rays and X-Ray Diffraction

Appearance of Electromotive Forces in Amorphous Selenium Under the Action of X-Rays, F. I. Kolomoitsev and F. F. Kodzhespirov - 823.

Changes in X-Ray Line Intensities on Deforming Polycrystals, B. I. Smirnov - 193.

Influence of Extinction on the Intensity of X-Ray Interferences in the Investigation of Steel, E. L. Gal'perin and Yu. S. Terminasov - 1276.

On Certain Comparative Characteristics of the FSK-M and FS-K Photoconductors When Exposed to X-Rays, S. V. Svechnikov - 588.

On the Collimation Correction in the Theory of Small-Angle X-Ray Scattering, V. N. Filipovich - 938.

Remarks on a Paper by D. M. Vasil'ev "A Method of Resolving the K_{α}-Doublet in X-Ray Lines" [1], E. G. Nesterenko - 2024.

Sources of Shot X-Ray Pulses for Investigation Fast Processes, V. A. Tsukerman and M. A. Manakova - 353.

Very-Low-Angle Scattering of X-Rays by Submicroscopic Imperfections, S. N. Zhurkov and A. I. Slutsker - 1287.

X-Ray Investigation of Solid Solutions of Calcium Aluminoferrites, A. I. Boikova and E. A. Porai-Koshits - 1023.
X-Ray Study of Lattice Strains in Aluminum Deformed at Liquid-Nitrogen Temperature, S. O. Tsobkallo and B. I. Smirnov - 1780.

ERRATA, SOVIET PHYSICS – TECHNICAL PHYSICS, VOL. 2, 1957

No. 1

Page	Line	Reads	Should read
62	12 of text	the higher the carrier concentration at higher temperatures, the bigger the deviation from the laws established in the previous paragraph.	the higher the carrier concentration, the higher the temperatures at which deviations are observed from the laws established in the previous paragraph.
73	[14]	O. K. Rais	O. K. Rice
127	6 from bottom	constituent cylinders	generators of the cylinders
130	4 from bottom	the neutralized boundary condition	averaged boundary condition
131	line 11	absolute terms	inhomogeneous terms
132	line 4	some of the first equations	the first few equations
132	line 9	ignoring only the main terms	keeping only the main terms
133	7 from bottom	the neutralized boundary condition	averaged boundary condition
133	line 4	Expressing K over I and I	Expressing K in terms of I and I'
134	17 from bottom	constituent cylinders	generators of the cylinders
136	6 of text onward	non-viscous	incompressible
136	15 of text	since assumptions about the flow potential are useless	since the assumption of potential flow is invalid
139	line 8	By integrating from B to F	Along the path of integration from B to F
145	line 5	is reflected by the two segments	is mapped into the two arcs
147	6 from bottom	y is the normal to the cross section of the jet along a line of mean velocity	y is the average velocity component normal to the jet cross section
153	line 16	which relates to a pressure drop in unperturbed flows of Δp	in units of the pressure drop, Δp, in the unperturbed flow
153	line 20	is related to	is taken relative to
179	9 of text	the calculations involved two assumptions	the calculations were made on two different assumptions
180	line 3	begin to increase	increase at first
181	line 20 and throughout	the end of the fundamental absorption, the foot of the fundamental absorption	the fundamental absorption edge

No. 2

237	lines 13, 14 of text	Frölich	Fröhlich
238	16 from bottom	may impede the scattering	may be hindered by the scattering

ERRATA (Continued)

No. 5

Page	Line	Reads	Should read
896	[5]	G. Shtaub	H. Staub
896	[6]	Leb	Loeb
920	[2]	Bhattacherya	Bhattacheraya
957	[2]	U. Mason	W. Mason
981	line 23	had the great advantage	had the great defect
981	16 from bottom	viscous flow	laminar flow
988	[8]	E. Werwey and G. Overbuk	E. Verwey and G. Overbeck
1016	Title and throughout	Elastic fatigue	creep
1021	line 3	Sen-Venan	Saint-Venant
1022	line 4	a freely resting slab	a slab with free boundaries

No. 6

1062	line 15	up until	so long as
1076	[2]	Kh. S. Karslou	H. S. Carslaw
1102	[3]	M. Khansen	M. Hansen
1129	[8]	K. Hering	C. Herring

No. 9

1863	line 12	these functions determined by the dispersive properties	these functions determine the dispersive properties
1926	[5]	Marganau	Margenau
2000	[2]	Gursa	Goursat
2004	[1]	Kundtu	Kundtz

No. 10

2092	[3]	Johnes	Jones
2118	[5]	Prokht	Procht
2122	[1], [2]	Mattias	Matthias
2128	[1]	Fritzshe	Fritzsche
2128	[4]	X.	W.
2149	2 from bottom	equilibrium value	nonequilibrium value
2152	line 16 onwards	intersite	interstitial

No. 11

2273	[7]	Weisscopf	Weisskopf

ERRATA (Continued)

Page	Line	Reads	Should read
2282	[10]	Schrietter	Schrieffer
2336	line 20	Second, only the first order distortions of the potential corresponding to the deformation of the lattice, due to the displacement of elements along the potential lines, were considered and the second order distortions due to the change of the magnitude of the potential were not considered	Secondly, we considered only distortions of the potential of the first kind, which are associated with displacement of elements of the potential curve along the coordinates in accordance with the distortion of the lattice, and did not consider distortions of the second kind. . .
2337	line 22	Taylor series into deformation components	Taylor series in the deformation components
2338	line 16	derivate of E	derivative of E
2339	7 from bottom	and as the changes in the mean free path cancel each other	and since we add the reciprocal lengths
2339	2 from bottom	than on the	than the
2392	line 22	the dependence of φ on . . .	the dependence of . . . on φ

SOVIET PHYSICS – TECHNICAL PHYSICS, VOL. 2, INDEX

(Index of the Journal of Technical Physics of the USSR,

Vol. 27, 1956)

CONTENTS

	Page
Analytical Author Index	1
Analytical Subject Index	15
Errata	31

SIGNIFICANCE OF ABBREVIATIONS MOST FREQUENTLY ENCOUNTERED IN SOVIET PHYSICS PERIODICALS

AN SSSR	*Academy of Sciences, USSR*
FIAN	*Physics Institute, Academy of Sciences USSR*
GITI	*State Scientific and Technical Press*
GITTL	*State Press for Technical and Theoretical Literature*
GOI	*State Optical Institute*
GONTI	*State United Scientific and Technical Press*
Gosenergoizdat	*State Power Press*
Gosfizkhimizdat	*State Physical Chemistry Press*
Goskhimizdat	*State Chemistry Press*
GOST	*All-Union State Standard*
Goztekhizdat	*State Technical Press*
GTTI	*State Technical and Theoretical Press*
GUPIAE	*State Office for Utilization of Atomic Energy*
IF KhI	*Institute of Physical Chemistry Research*
IFP	*Institute of Physical Problems*
IL	*Foreign Literature Press*
IPF	*Institute of Applied Physics*
IPM	*Institute of Applied Mathematics*
IREA	*Institute of Chemical Reagents*
ISN (Izd. Sov. Nauk)	*Soviet Science Press*
IIaP	*Institute of Nuclear Studies*
Izd	*Press (publishing house)*
KISO	*Solar Research Commission*
LETI	*Leningrad Electrotechnical Institute*
LFTI	*Leningrad Institute of Physics and Technology*
LIM	*Leningrad Institute of Metals*
LITMiO	*Leningrad Institute of Precision Instruments and Optics*
Mashgiz	*State Scientific-Technical Press for Machine Construction Literature*
MATI	*Moscow Aviation Technology Institute*
MGU	*Moscow State University*
Metallurgizdat	*Metallurgy Press*
MOPI	*Moscow Regional Pedagogical Institute*
NIAFIZ	*Scientific Research Association for Physics*
NIFI	*Scientific Research Institute of Physics*
NIIMM	*Scientific Research Institute of Mathematics and Mechanics*
NII ZVUKSZAPIOI	*Scientific Research Institute of Sound Recording*
NIKFI	*Scientific Institute of Motion Picture Photography*
OIIaI	*Joint Institute of Nuclear Studies*
ONTI	*United Scientific and Technical Press*
OTI	*Division of Technical Information*
OTN	*Division of Technical Science*
RIAN	*Radium Institute, Academy of Sciences of the USSR*
SPB	*All-Union Special Planning Office*
Stroiizdat	*Construction Press*
URALFTI	*Ural Institute of Physics and Technology*

NOTE: Abbreviations not on this list and not explained in the translation have been transliterated, no further information about their significance being available to us.—*Publisher.*

The expanded program of the American Institute of Physics comprises translation of six leading Soviet physics journals, as listed below. These translations, by competent, qualified scientists, provide all research laboratories and libraries with accurate and up-to-date information of the results of research in the U.S.S.R.

Soviet Physics—Technical Physics

A translation of the "Journal of Technical Physics" of the Academy of Sciences of the U.S.S.R. The translation began with the 1956 issues. Twelve issues per year, approximately 3,000 Russian pages. Annually $75.00 domestic, $79.00 foreign. Libraries* $35.00 domestic, $39.00 foreign. Back numbers, all issues $8.00.

Soviet Physics—Acoustics

A translation of the "Journal of Acoustics" of the Academy of Sciences of the U.S.S.R. The translation began with the 1955 issues. Four issues per year, approximately 400 Russian pages. Annually $12.00 domestic, $14.00 foreign. (No library discounts.) Back numbers, all issues $4.00.

Soviet Physics—Doklady

A translation of all of the "Physics Sections" of the Proceedings of the Academy of Sciences of the U.S.S.R. The translation began with the 1956 issues. Six issues per year, approximately 1,500 Russian pages. Annually $35.00 domestic, $38.00 foreign. Libraries* $15.00 domestic, $18.00 foreign. Back numbers for Volumes 1 and 2, $5.00 per issue; Volume 3 and subsequent, $7.00 per issue.

Soviet Physics—JETP

A translation of the "Journal of Experimental and Theoretical Physics" of the Academy of Sciences of the U.S.S.R. The translation began with the 1955 issues. Twelve issues per year, approximately 4,000 Russian pages. Annually $75.00 domestic, $79.00 foreign. Libraries* $35.00 domestic, $39.00 foreign. Back numbers, all issues $8.00.

Soviet Physics—Crystallography

A translation of the journal "Crystallography" of the Academy of Sciences of the U.S.S.R. The translation began with the 1957 issues. Six issues per year, approximately 1,000 Russian pages. Annually $25.00 domestic, $27.00 foreign. Libraries* $10.00 domestic, $12.00 foreign. Back numbers, all issues $5.00.

Soviet Astronomy—AJ

A translation of the "Astronomical Journal" of the Academy of Sciences of the U.S.S.R. The translation began with the 1957 issues. Six issues per year, approximately 1,100 Russian pages. Annually $25.00 domestic, $27.00 foreign. Libraries* $10.00 domestic, $12.00 foreign. Back numbers, all issues $5.00.

Subscriptions should be addressed to the American Institute of Physics, 335 East 45th Street, New York 17, N. Y.

* For libraries of non-profit academic institutions.